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THE SCHOOL REVIEW

THE

SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

Edited by

THE FACULTY OF THE SCHOOL OF EDUCATION OF THE UNIVERSITY OF CHICAGO

VOLUME XXI

JANUARY—DECEMBER, 1913

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

School of Education
March 16, 1955
43616

Published
January, February, March, April, May, June, September,
October, November, December, 1913

Composed and Printed By
The University of Chicago Press
Chicago, Illinois, U.S.A.

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INDEX TO VOLUME XXI

AUTHORS

Angell, James Rowland.—The Duplication of School Work by the College, 1–10.
Babcock, E. B.—The Use of Phonetics in Teaching Elementary French, 608–17.
Barker, James F.—A Home-Room Plan, 235–38.
Butler, Nathaniel.—Report of the Twenty-fifth Educational Conference of the Secondary Schools in Relations with the University of Chicago, 398–411.
Church, H. O.—The Use of Scientific Material in the High-School Course in English, 461–66.
Clark, Bertha May.—Living versus Dead Biology, 250–53.
Coleman, Norman F.—The Bible as Literature in the High School, 246–49.
Colvin, Stephen S.—The Practical Results of Recent Studies in Educational Psychology, 307–22.
Crawshaw, F. D.—College Entrance and Advanced Credits for Manual Arts, 467–74.
Dearborn, Walter F.—The Practical Results of Recent Studies in Educational Statistics, 297–306.
Eikenberry, W. L.—First-Year Science in Illinois High Schools, 542–48.
Elliott, Edward C.—*See* Starch, Daniel.
Gosling, Thomas Warrington.—Tobacco and Scholarship, 690.
Hahn, Walter L.—A Plea for Out-of-Door Zoölogy, 50–54.
Hale, William Gardner.—The Classification of Sentences and Clauses, 388–97.
Hardschin, Charles Hart.—Modern Language Instruction in Normal Schools, 694.
Heald, Lucy.—George Meredith's Interest in Education, 112–23.
Hoffman, Frederick L.—Some Vital Statistics of Children of School Age, 657.
Hosic, James Fleming.—Co-operation of All Departments in the Teaching of English, 598–607.
Host, Arthur G.—First-Year Work in Modern Languages, 549–59.
Jessup, Walter A.—The Shifting School Population, 513–22.
Johnson, Franklin W.—The Hillegas-Thorndike Scale for Measurement of Quality in English Composition by Young People, 39–49.
Judd, Charles H.—The Meaning of Secondary Education, 11–25.
Judson, Harry Pratt.—Economy in Education, 441–45.
Kelsey, Francis W.—The Eighteenth Michigan Classical Conference, 191–200.
Kendall, Calvin N.—The Training of High-School Teachers, 92–102.
Kingsbury, H. B.—*See* Rounds, C. R.
Kirkland, J. H.—The Association of Colleges and Secondary Schools of the Southern States, 103–11.
Locard, Frederic.—The Study of French in the Public High Schools of the United States, 682.
McLane, C. L.—The Junior College, or Upward Extension of the High School, 161–70.
Miller, George J.—A High-School Course in Field Geography, 171–79.
Minnick, J. H.—An Experiment in the Supervised Study of Mathematics, 670.
Moore, Ernest C.—Improvement in Educational Practice, 323–33.
Moore, Paul E.—The Paradox of Oxford, 369–87.
Potter, George M.—Relative Efficiency of Public and Private Secondary Institutions, 523–37.
Price, William R.—The Second Year of a Modern Language, 36–38.
Reavis, W. C.—An Experiment in the Teaching of High-School Composition, 538–41.
Richardson, Charles F.—The Problem of Waste in the College Lecture, 334–43.
Robertson, C. B.—The Training of Secondary-School Teachers, 225–34.
Rounds, C. R., and Kingsbury, H. B.—Do Too Many Students Fail? 585–97.
Shallies, Guy-Wheeler.—The Distribution of High-School Graduates after Leaving School, 81–91.

Sheffield, Alfred Dwight.—Grammatical Concepts and Their Names, 180–86.
Shideler, Samuel Ervin.—Qualifications, Salary, and Tenure of the Teachers in the Commissioned High Schools of Indiana, 446–60.
Short, R. L.—The Institutional High School and What It Does for the Community, 475–77.
Starch, Daniel, and Elliott, Edward C.—Reliability of Grading Work in History, 676.
Starch, Daniel, and Elliott, Edward C.—Reliability of Grading Work in Mathematics, 254–59.
Thompson, Grace.—High-School Reading: the Newark Plan, 187–90.
Wallace, J. A.—A Plan for Outside Reading, 478–85.
Warren, Irene.—Current Educational Literature in the Periodicals, 77–80, 158–60, 220–24, 293–96, 365–68, 438–40, 508–12, 584, 655–56, 720.
Webb, Harrison E.—The Cumulative Examination in Mathematics, 627–36.
Wheeler, George.—The Six-Year High School, 239–45.
Winter, John G.—Greek and Latin in the Schools of Belgium, 618–26.

ARTICLES

Association of Colleges and Secondary Schools. *See* Southern States.
Belgium, Greek and Latin in the Schools of, John G. Winter, 618–26.
Bible, The, as Literature in the High School, Norman F. Coleman, 246–49.
Biology, Living, versus Dead, Bertha May Clark, 250–53.
College Lecture. *See* Waste.
Conference, The Eighteenth Michigan Classical, Francis W. Kelsey, 191–200.
Current Educational Literature in the Periodicals, Irene Warren, 77–80, 158–60, 220–24, 293–96, 365–68, 438–40, 508–12, 584, 655–56, 720.
Duplication of School Work. *See* School Work.
Education, Economy in, Harry Pratt Judson, 441–45.
Education, George Meredith's Interest in, Lucy Heald, 112–23.
Education, The Society of College Teachers of, 124–33.
Educational Practice, Improvement in, Ernest C. Moore, 323–33.
Educational Psychology, The Practical Results of Recent Studies in, Stephen S. Colvin, 307–22.
Educational Statistics, The Practical Results of Recent Studies in, Walter F. Dearborn, 297–306.
English Composition, Co-operation of all Departments in the Teaching of, James Fleming Hosic, 598–607.
Extension. *See* Junior College.
Field Geography, A High-School Course in, George J. Miller, 171–79.
French, Elementary. *See* Phonetics.
French, The Study of, in the Public High Schools of the United States, Frederic Locard, 682.
Grammatical Concepts and Their Names, Alfred Dwight Sheffield, 180–86.
Greek and Latin. *See* Belgium.
High School, The Six-Year, George Wheeler, 239–45.
High-School Composition, An Experiment in the Teaching of, W. C. Reavis, 538–41.
High-School Graduates, The Distribution of, after Leaving School, Guy-Wheeler Shallies, 81–91.
High-School Reading: the Newark Plan, Grace Thompson, 187–90.
High-School Teachers, The Training of, Calvin R. Kendall, 92–102.
Hillegas-Thorndike Scale, The, for Measurement of Quality in English Composition by Young People, Franklin W. Johnson, 39–49.
History, Reliability of Grading Work in, Daniel Starch and Edward C. Elliott, 676.
Home-Room Plan, A, James F. Barker, 235–38.
Institutional High School, The, and What It Does for the Community, R. L. Short, 475–77.
Junior College, The, or Upward Extension of the High School, C. L. McLane, 161–70.
Manual Arts, College Entrance and Advanced Credits for, F. D. Crawshaw, 464–74.
Mathematics, Reliability of Grading Work in, Daniel Starch and Edward C. Elliott, 254–59.
Mathematics, The Cumulative Examination in, Harrison E. Webb, 627–36.
Measurement of Quality. *See* Hillegas-Thorndike.
Meredith, George. *See* Education.

Modern Language, The Second Year of a, William R. Price, 26–38.
Modern Languages, First-Year Work in, Arthur G. Host, 549–59.
Outside Reading, A Plan for, J. A. Wallace, 478–85.
Oxford, The Paradox of, Paul E. More, 369–87.
Phonetics, The Use of, in Teaching Elementary French, E. B. Babcock, 608–17.
School Population, The Shifting, Walter A. Jessup, 513–22.
School Work, The Duplication of, by the College, James Rowland Angell, 1–10.
Science, First-Year, in Illinois High Schools, W. L. Eikenberry, 542–48.
Scientific Material, The Use of, in the High-School Course in English, H. O. Church, 461–66.
Secondary Education, The Meaning of, Charles H. Judd, 11–25.
Secondary Institutions, Relative Efficiency of Public and Private, George M. Potter, 523–37.
Secondary-School Teachers, The Training of, C. B. Robertson, 225–34.
Secondary Schools, Report of the Twenty-fifth Conference of the, in Relations with the University of Chicago, Nathaniel Butler, 398–411.
Sentences and Clauses, The Classification of, William Gardner Hale, 388–97.
Southern States, The Association of Colleges and Secondary Schools of, J. H. Kirkland, 103–11.
Students, Do Too Many Fail? C. R. Rounds and H. B. Kingsbury, 585–97.
Supervised Study, An Experiment in the, of Mathematics, J. H. Minnick, 670.
Teachers, Qualifications, Salary, and Tenure of the, in the Commissioned High Schools of Indiana, Samuel Ervin Shideler, 446–60.
Tobacco and Scholarship, Thomas Warrington Gosling, 690.
Vital Statistics, Some, of Children of School Age, Frederick L. Hoffman, 657.
Waste, The Problem of, in the College Lecture, Charles F. Richardson, 334–43.
Zoölogy, A Plea for Out-of-Door, Walter L. Hahn, 50–54.

BOOKS REVIEWED

Abbott, Frank Frost, The Common People of Ancient Rome: Studies of Roman Life and Literature (Walter Dennison), 289–90.
Alden, Raymond MacDonald, Readings in English Prose of the Eighteenth Century (H. B. Lathrop), 579–81.
Andrews, E. F., A Practical Course in Botany (Frederick C. Newcombe), 153–54.
Arey, A. L., Bryant, F. L., and Clendenin, W. W., Physiography for High Schools (George J. Miller), 153.
Aspinwald, William B., Outlines of the History of Education (Frank P. Graves), 573–74.
Ballard, Anna W., Short Stories for Oral French (C. J. Cipriani), 67–69.
Bellows, Max, Dictionary of German and English, English and German (Adolph C. von Noé), 581.
Bennett, R. J., Bookkeeping and Accounting Exercises (George A. Beers), 715.
Betts, George Henry, Social Principles of Education (Robert A. Cummins), 713.
Bigelow, Maurice A., Teachers' Manual of Biology (George D. Fuller), 432–34.
Bigelow, Maurice A., and Anna N., Applied Biology (George D. Fuller), 432.
Bright, James Wilson, and Miller, Raymond Durbin, The Elements of English Versification (Percy W. Long), 502–3.
Bronson, Walter C., American Poems (R. L. Lyman), 651–52.
Burton, Richard, Masters of the English Novel: A Study of Principles and Personalities (Louis A. Strauss), 288–89.
Canby, Henry S., A Study of the Short-Story (E. M. Albright), 710.
Carver, Thomas Nixon, Principles of Rural Economics (C. H. Robison) 210–11.
Clark, Bertha M., General Science (John A. Montgomery), 500–501.
Cooley, Edwin G., Vocational Education in Europe (John F. Bobbitt), 279–81.
Crawshaw, Fred D., Manual Arts for Vocational Ends (William F. Bawden), 572–73.
Cubberley, Ellwood P., The Improvement of Rural Schools (C. H. Robison), 211.

Cummings, Prentiss, The *Iliad* of Homer (Herbert H. Yeames), 422–24.
Davis, Benjamin Marshall, Agricultural Education in Public Schools (C. H. Robison), 211–12.
Davis, Kary Cadmus, Productive Farming (Ernest Burnham), 430–31.
Dowd, Mary H., and Winchell, F. Mabel, Home Reading for High-School Pupils (Grace Thompson), 387.
Dryer, Charles R., High-School Geography (George J. Miller), 152.
Duggar, Benjamin M., Plant Physiology, with Special Reference to Plant Production (Otis W. Caldwell), 69–70.
Eastman, Max, The Enjoyment of Poetry (Gertrude Buck), 496–97.
Engeln, O. D. von, A Guide for Laboratory Geography Teaching (Carl Russell Fish), 649–50.
Forman, S. E., The American Republic: A Text in Civics for High Schools, Academies, and Normal Schools (Karl F. Geiser), 427–28.
François, Victor E., Essentials of French (C. J. Cipriani), 213–14.
Garber, John Palmer, Current Educational Activities (Frank W. Ballou), 215–16.
Garner, James W., Government in the United States: National, State, and Local (Karl F. Geiser), 426–27.
Gettell, Raymond Garfield, Introduction to Political Science (Karl F. Geiser), 428–29.
Graves, Frank Pierrepont, Great Educators of Three Centuries: Their Work and Its Influence on Modern Education (R. M. Tryon), 577–78.
Gulick, Luther Halsey, and Ayres, Leonard P., Medical Inspection of Schools (D. P. MacMillan), 650–51.
Hall, Edwin H., Elements of Physics, 714.
Hart, C. A., and Feldman, Daniel D., Plane and Solid Geometry (J. F. Millis), 434.
Hawkes, Herbert E., Higher Algebra (H. E. Cobb), 647.
Hawkins, A. D., Applied Physics (H. E. Cobb), 647.
Hill, George A., Essentials of Physics (Charles H. Smith), 716.
Holmes, Arthur, The Conversation of the Child: A Manual of Clinical Psychology Presenting the Examination and Treatment of Backward Children (M. V. O'Shea), 284–86.
Holmes, William H., Social Organization and the Individual Child (E. A. Kirkpatrick), 717.
Hopkins, Cyril G., Soil Fertility and Permanent Agriculture (K. C. Davis), 154–55.
Johnston, Charles H., High School Education (Irving King), 359–60.
Johnstone, Hilda, A Hundred Years of History (D. S. Muzzey), 503–4.
Jones, Sources of Interest in High-School English (J. A. Wallace), 578–79.
Klemm, L. R., Public Education in Germany and in the United States (Frank A. Manny), 424–25.
Lawrence, William Witherle, Medieval Story and the Beginnings of the Social Ideals of English-Speaking People (Samuel Foss Holmes), 495–96.
Leavitt, Frank Mitchell, Examples of Industrial Education (John F. Bobbitt), 278–79.
Lincoln, Jeannette E., The Festival Book: May Day Past-Time and the May Pole (P. W. Dykema), 71.
McKeever, William A., Training the Boy (Edgar James Swift), 711.
McKready, Kelvin, A Beginner's Star Book (G. W. Myers), 72–73.
Mall, Dr. Albert, The Sexual Life of the Child (E. A. Kirkpatrick), 709.
Marshall, John Sayce, Mouth Hygiene (George L. Meylan), 216–17.
Mead, George H., Wreidt, Ernest A., and Bogan, William J., A Report on Vocational Training in Chicago and Other Cities (John F. Bobbitt), 277–78.
Monroe, Paul, A Cyclopedia of Education (Irving King), 425–26.
Monroe, Paul, Syllabus of a Course of Study on the History and Principles of Education (Frank P. Graves), 573.
Moore, J. R. H., An Industrial History of the American People (C. R. Fish), 574–75.
Noyes, William, Syllabus of a Course on Elementary Woodworking (William T. Bawden), 572.
Offner, Max, Mental Fatigue (S. S. Colvin), 150–51.
Olmstead, Everett Ward, and Gordon, Arthur, Gramatica Castellana (Carrie E. Tucker Dracass), 431–32.
Parker, Samuel Chester, A Textbook in the History of Modern Elementary Education (Frank P. Graves), 497–500.
Peabody, James Edward, and Hunt, Arthur Ellsworth, Elementary Biology, Animal and Human (George L. Meylan), 217.
Pratt, James A., Materials and Construction (William F. Bawden), 572.

Reeve, Frederick C., Physical Laboratory Guide (H. E. Cobb), 647.
Robertson, John G., Outlines of the History of German Literature (Adolph C. von Noé), 581.
Robison, Clarence Hall, Agricultural Instruction in the Public High Schools of the United States (Ernest Burnham), 429–30.
Salisbury, Rollin D., Barrows, Harlan H., and Tower, Walter S., Elements of Geography (George J. Miller), 151–52.
Schultze, Arthur, The Teaching of Mathematics in Secondary Schools (Raleigh Shoring), 504–6.
Seerley, Homer H., The Country School (Mabel Lodge), 501–2.
Sharp, Frank Chapman, Success: A Manual of Moral Instruction (M. V. O'Shea), 360–62.
Simpson, Benjamin R., Correlations of Mental Abilities (J. B. Miner), 712.
Smith, David Eugene, The Present Teaching of Mathematics in Germany (G. W. Myers), 71–72.
Smith, Percy F., and Gale, Arthur S., New Analytic Geometry (H. E. Cobb), 647.
Snow, William B., Fundamentals of French Grammar (C. J. Cipriani), 212–13.
Steitz, Wilhelm, Education for Life in American High Schools (Lydia M. Schmidt), 282–84.
Stone, John C., and Millis, James F., Elementary Plane Geometry (H. E. Cobb), 647–49.
Swift, Edgar James, Youth and the Race (Daniel Starch), 575.
Talbot, L. Raymond, Le français et sa patrie (C. J. Cipriani), 214–15.
Tarr, R. S. and von Engeln, O. D., A Laboratory Manual for Physical and Commercial Geography (Carl Russell Fish), 649.
Thackston, John A., High-School Manual for Florida (A. W. Calhoun), 155.
Thorndike, Edward L., Educational Psychology (Frank N. Freeman), 69.
Thurston, Ernest L., Business Arithmetic for Secondary Schools (George A. Beers), 716.
Tolman, William H., and Guthrie, Adelaide Wood, Hygiene for the Worker (George L. Meylan), 502.
Van Tuyl, George H., Complete Business Arithmetic (J. F. Millis), 434–35.
Vietor, Wilhelm, Kleines Lesebuch in Lautschrift (Adolph C. von Noé), 581.
Ward, Gilbert O., Practical Use of Books and Libraries: An Elementary Manual (Grace Thompson), 287.
Ward, Gilbert O., Teaching Manual to Accompany the "Practical Use of Books and Libraries" (Grace Thompson), 287.
Weeks, Ruth Mary, The People's School: A Study in Vocational Training (John F. Bobbitt), 281–82.
Wells, Webster, and Hart, Walter W., First-Year Algebra (J. F. Millis), 435.
White, William Alfred, Harmonic Part-Writing (P. W. Dykema), 286–87.

BOOKS RECEIVED

74–76, 156–57, 218–19, 291–92, 363–64, 436–37, 506–7, 582–83, 653–54, 718–19.

THE SCHOOL REVIEW
A JOURNAL OF SECONDARY EDUCATION

VOLUME XXI JANUARY 1913 NUMBER 1

THE DUPLICATION OF SCHOOL WORK BY THE COLLEGE

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A generation or two ago the dividing line between the college and the secondary school was reasonably sharp and distinct. At present it is extremely ill defined and the indistinctness threatens daily to increase. Formerly the secondary school found almost its entire function in college-preparatory work and accordingly it covered only such ground as the college desired. Under this arrangement the college was naturally exempt from undertaking much of anything done by the school. Moreover, the materials of knowledge fit for presentation in the school were relatively limited, the curriculum was substantially inflexible and stereotyped, and as a consequence the problem of avoiding serious overlappings in the work of school and college hardly arose. The line between the collegiate and the secondary was determined primarily in terms of subject-matter rather than in terms of method, but it was well recognized and easily understood.

The wealth of subject-matter offered in a high-school curriculum today often hopelessly outruns any possibility of mastery by a given pupil within a four-year period and much therefore remains untouched which the student may possibly wish to attack at a later point in his career. The college has been willing in increasing degree to satisfy this demand and as a result we find a wide range of identical subjects taught in school and college. The mere fact

that the two varieties of institution offer the same work is not itself conclusive evidence of waste, but a careful study of the situation leads one to question whether the present practice is really defensible in all its aspects.

The situation is somewhat complicated by the fact that many high schools, no longer content to conclude their work with four years, are going on to add a fifth and even a sixth year, with the result that the college is finding its preserves encroached upon to a very marked degree. The time seems ripe for an inquiry into the present conditions and the writer herewith makes a beginning which he hopes to carry farther in the near future.

The question at once presents itself whether the college from the standpoint of its own purely selfish interests is employing its resources and energies wisely when it duplicates to any large extent the work of the high schools. In considering this issue, we may well remember that our colleges pursue two lines in their practice with regard to the school work which they duplicate. In the one case they do the seemingly obvious thing and after a student has covered certain ground in school he is permitted to proceed in college to the next more advanced stage of the same subject. Work in the modern languages may illustrate this case. But in the second instance, where the colleges offer work which is nominally identical with that done in the schools and entrance credit is given for the same, the student, when once he is safely inside the college walls, finds himself set to doing right over again much which he has already done in school.[1] This procedure is frequently justified on the ground that the work is carried on in college from a more mature and advanced point of view. Certain courses in science both physical and biological may illustrate this case upon which we may well comment for a moment.

It would be idle to deny that the content of a course in botany given during the second or third year of the high-school course might be presented to college Freshmen or to Sophomores in a more mature and scientifically substantial way. But where the colleges find it necessary to accept such work for entrance and then pro-

[1] It is to be remembered that colleges sometimes refuse to recognize school work in any way, even for entrance. In such cases the requirement that the student begin anew is logically less peculiar.

ceed practically to disregard it and in large measure to repeat it, one can only feel that the educational system which permits or encourages such duplication lacks co-ordination, that its earlier and later stages are out of touch with one another, and that we have in such maladjustment a form of wastage which is unfair both to the student and to the teacher.

No doubt high-school science must always vary somewhat from college science, but it must surely be possible to have high-school and college teachers of these subjects reach such an agreement as to content and method as shall save us from the present costly form of duplication. Something is surely wrong when college students who have never pursued a given subject can carry it on in college upon entirely equal terms with other students who have made a nominal beginning upon it in school. Only in those instances where the work at issue had been undertaken very early in the school course and so had perhaps been forgotten, or had been necessarily presented in a very rudimentary way, could such a situation be justified. Nor could the justification be complete here, for it is doubtful whether the inclusion of any work in the school curriculum could be defended which was done in such a manner as to give the student who successfully mastered it no advantage over his colleague who might begin the same study three years later. If students were in these cases started once more at the beginning of a subject on the ground that a review is a valuable asset in intellectual development, the practice might be more enthusiastically approved. But although such review is an incident, it is neither the cause nor the real justification of the practice, as witness the presence in the same classes, and on nominally if not actually equal terms, of students who are taking up the subject for the first time.

A justification which one often hears urged for the procedure is that the teaching of certain subjects in the schools is so incompetent as to make it essential for the college to start its work from the beginning. No doubt in individual instances this might prove to be true, but as a general indictment it cannot be accepted. It would be just as applicable to one topic as to another if framed as a universal charge and we have already seen that the colleges accept and build upon a large amount of school work, however many

reservations they may entertain as to the efficiency of the high-school instruction.

The obvious moral of all this seems to be the need of intelligent collaboration between high-school and college authorities. It is surely futile to contend that high-school teaching is and must remain so uniformly bad that the college can be justified in systematically disregarding any work done in the secondary school. If there are subjects now given in the early years of the high-school course which cannot be properly given at that time, school and college teachers ought to work out the problem of the wise point at which such courses may be introduced. If the school is justified in giving its work in a way not exactly in parallel with the corresponding work of the college, then that fact ought to be clearly understood and the best possible adjustment worked out. At present the college is prone to judge the performance of the schools purely in terms of its own prepossessions and these may do justice to only a portion of the entire situation. The school, on the other hand, is likely to proceed on the basis of the individualistic bias of the teacher momentarily in charge of its courses. Substantial progress is only possible by means of a co-operation based upon a large and intelligent outlook upon the whole educational problem.

Reverting to our original question we may state it in general form thus: Is the modern college justified as a matter of general educational policy, a matter of the most judicious expenditure of its means, the most useful service to the community, in offering any considerable amount of work which the schools are prepared to give and which in actual fact they do give? Put in more specific form and from the pedagogical viewpoint as it would arise in connection with modern-language instruction for example, the problem may be formulated in this way: Is it not clear that for the college to continue to offer an unlimited quantity of beginning work is simply to encourage the indefinite maintenance of unwholesome educational tendencies in accordance with which the mastery of these subjects is postponed to a period when they are acquired with a maximum instead of a minimum of difficulty?

One is disposed to say that in view of the widening reach of the field of knowledge the college may with propriety undertake a cer-

tain amount of work obviously lying on the boundaries between the schools and the colleges, but that it should jealously examine every such invasion of school territory to make sure that by reason of it there is not encouraged and perpetuated the postponement to a late point in the curriculum of studies whose prime educational justification is to be found when introduced early. Furthermore, the college may well take thought when it discovers that any considerable fraction of its energy is going into work of this type. After all, the first duty of a college is to offer collegiate work and those who wish to continue secondary work indefinitely may properly be referred to secondary institutions. An education made up wholly of beginnings is a poor thing and the actual courses pursued by many of our college students display an amazing amount of such achievement.

There is no reason to suppose that the conditions in the University of Chicago vary materially in this particular from those characterizing other institutions of higher learning in the United States. Certainly the University has on more than one occasion and by more than one device attempted to protect itself from the disposition of many of its patrons to occupy an undue amount of their college life with elementary work. Despite this fact, an examination of the records of a large number of recent graduates indicates that fully one-third of their entire college course was given to work which could have been pursued in any one of our better high schools. The University requires for its degree that at least one-third of the work presented by a student shall be of the Senior College grade, that is to say: shall be work of an advanced character. Many students actually pursue considerably more such work, but it is perfectly clear that despite this fact a very large fraction of the studies taken are secondary rather than collegiate in kind, although they may be presented in a manner more mature and thoroughgoing than is usual in a school.

From the administrative point of view this means that a very large part of the instructional energy of the institution has gone into work of this type and that a very considerable amount of its resources has been drawn upon to support such instruction. Again it should be repeated that the conditions in this institution are as

regards this particular matter in no wise substantially different from those characterizing other American universities of the first class. Whether or not this very large reduplication by the college of work offered in the schools can be financially justified seems more than problematical. Certainly no one who has faced the facts directly can fail to agree that much still remains to be done by intelligent co-operation in minimizing this type of duplication. If the schools are able and ready to take charge of these courses, the college may well be willing to abandon many of them in order to contribute more of those things which no school is either able or ambitious to attempt.

If the discussion be transferred from such general issues as have been above touched upon and one comes, as one ultimately must, to an analysis of the specific details at issue, one is likely to feel that although the general line of advance is very obvious, progress on that line can be and ought to be much more rapidly achieved in connection with certain subjects than in connection with others. Thus in the case of the modern languages, so far as concerns the strictly educational aspects of the problem the writer does not chance to know anyone who demurs to the proposition that their study should be begun not later than the secondary-school period and if possible in the primary grades. This program of course involves their pursuit in large measure by means of the so-called natural method. But whatever divergence of opinion there may be concerning the proper method of studying these languages in college, the writer has never heard any serious objections to the plea for the natural method with young children. Educationally, psychologically, practically, it would represent a prodigious saving of time and energy if we could get these topics back into the elementary and secondary schools.

Moreover, it is very difficult to feel that the beginning of a modern language can be made in any very strict sense collegiate work. Something could surely be urged for discounting it as being on a lower level than certain other forms of college work. To get rid of the burden of teaching this rudimentary material to class after class of college students would be a boon which every college department of modern language would appreciate to the full.

The difficulty confronting us is therefore the practical one of disposing of the student who comes from the secondary school without his French and German. What can be done to induce the student to secure this work in school, to coax the school to offer it persuasively at an earlier age than at present? Can the college in fact afford to refuse such elementary instruction?

Evidently any one college attacking this problem alone and single handed would find its course beset with trials; but here, as in so many educational problems, co-operation is no idle dream, and what one alone might not accomplish, many working together can readily achieve. It is in the direction of concentrated action then that any large and reasonably prompt results are to be looked for. If the schools can be induced to introduce modern-language work in the grades and can be induced to keep such work vividly in the foreground in the secondary period, and if school and college teachers can be gotten together in a program of intelligent co-operation, we can expect to see the college rapidly lopping off a large part of the incubus of its elementary language work—work which it can do only at great disadvantage and which done on any terms is hardly collegiate.

The situation which confronts us in the organizing of our work in English is in many respects even more unsatisfactory than that peculiar to modern languages. In the case of English, however, as in the case of the sciences, referred to a little above, the main difficulty appears to attach to the reduplication of substantially identical work, rather than to the question of an undue deferment of work which should have been started in the school period. The history of the child who was confronted with the beauties of *Evangeline* at six different points in his school and college training is typical of the type of mal-co-ordination which still, to a considerable degree, characterizes the relations of our English instruction in the schools and the colleges. The colleges frankly offer elementary courses in English which traverse ground substantially identical with that covered in the schools. In certain cases the college permits students to proceed in their election of college work to courses which are nominally in advance of those pursued in the school. In other cases the student is held back and required to

repeat what is essentially the same work already asked of him by the school. Here again, as in the case of the sciences, the justification offered is generally either that the teaching in the school has been poor, or that the student has failed to profit by it sufficiently to justify allowing him to proceed to the next stage of advancement. Nevertheless, in this case as in that of the science work, the college is willing to accept this poorly done English as fulfilling part of the entrance requirements. This case appears to offer another instance of maladjustment which could presumably be removed by a sufficiently careful and intelligent co-operation between the authorities of the school and the college.

History offers an instance in some regards still more annoying to the student. The writer knows an institution in which one or two or even more units of history are accepted for entrance and nevertheless the student presenting them is required to go into the same elementary college classes with students who present no history at all. Here the actual and obvious repetition of considerable portions of the subject-matter renders it more difficult to justify the procedure to the student.

Political economy, civics, commercial geography, physiography, zoölogy, botany, physiology, to mention no other subjects, all present similar anomalies. The college accepts the high-school credentials in these topics as valid for entrance and then permits or requires the student to start at the beginning once again if he wishes to pursue these subjects in college.

The writer recognizes that colleges vary in their practice concerning these matters, but the conservatism of one institution at one point is likely to be offset by a corresponding leniency at some other, so that the sum total of the case is likely to be found substantially as the above statement would indicate.

Physics and chemistry represent a more advanced condition of intelligent co-operation between school and college than do most of the other sciences, a fact which in part indicates greater progress in the standardizing of elementary work in these subjects, and in part bespeaks a more successful facing by school and college teachers of the problem presented by the articulation of school and college work. Even in these sciences, however, nothing is more

common than to hear college teachers complain of the poor preparation of the students who reach them from the schools, and in some institutions special provision is made for classes which do not exactly repeat the elementary work done in the school, but nevertheless approach the subject in a manner somewhat different from that followed by the classes constituted of students beginning the work in college. Even here, then, there is still some room for further progress in the relations of the school and the college courses.

In the case of the biological sciences the difficulties presented are numerous and perplexing. The laboratory equipment of many schools renders it difficult to do satisfactory work in these subjects and they are quite often given during the early part of the high-school curriculum, so that their content is apt to be relatively very simple, in purpose at least, and by the end of the school course a considerable part of the information gained is likely to have been forgotten. Moreover, the exigencies of local conditions, to say nothing of the intrinsic wisdom of such procedure, often lead the teachers of so-called nature sciences to offer courses in which zoölogy and botany are blended in a way that makes it difficult for the college to regard the work as an adequate preparation for the college courses which commonly distinguish somewhat sharply between these two divisions of biological science. Moreover, some schools have attempted to give under the heading of biological science courses which include other scientific considerations than those peculiar to botany and zoölogy. For example, a certain amount of physiology and even physiography may be incorporated in such courses. When the college is reached and the differentiation of these subjects is encountered, it is obvious that the training offered by such a general preliminary course can hardly display the disciplinary results characteristic of the college elementary work in specialized fields. Here again, then, there is obvious need for much more detailed study by joint commissions of school and college teachers before we may hope to secure any really satisfactory adjustment of the biological work carried on by the two types of institutions.

The work in civics and in commercial geography presents in one way a simpler situation, for these topics are perhaps less likely to

be offered by the school in such fashion as to invade other outlying fields. On the other hand, they are apt to be presented at a rather early point in the school curriculum and thus to suffer from considerable immaturity in the form of presentation and are likely to be rather completely forgotten by the time the student has reached college.

Political economy, on the other hand, is likely to be given later in the course, and if the teachers of this subject are able to come to some agreement as to the proper content for such a course in the school and as to the wise methods for presenting it, there seems to be no reason why the most wasteful aspects of the present practice may not be overcome. It is not uncommon at present for colleges to offer the work in political economy under such conditions that students ordinarily come to it in the Sophomore or Junior year. It is clear that so long as this practice continues it is to be expected that the content of the beginning courses in school and college should show considerable disparities, and in proportion as these are large and fundamental, the objection drops out against allowing or requiring students to pursue these elementary courses in college, even though they may have had some previous high-school work under the same title.

One thing emerges from our discussion with entire clearness, to wit, the practices at present in vogue result in a wholly needless waste of the students' time, much of which could presumably be avoided by intelligent collaboration of school and college teachers. It also appears to be reasonably certain that the college could employ to better advantage for all concerned some of its resources which are now devoted to teaching subjects that can unquestionably be best presented in the high school. How to bring about the changes necessary to secure the desired results remains to be determined.

THE MEANING OF SECONDARY EDUCATION[1]

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The student of American educational institutions finds himself very much confused when he attempts to discover the point at which the typical high school begins, and the point at which this middle school ends. There are many high schools in this country which carry on courses that in other communities are thought of as belonging to the elementary grades, and it is well known that many of our American colleges are in fact high schools in every respect except in name. This overlapping is evident in such details as methods of organization and subject-matter of instruction. Take such a characteristic as departmental instruction. In the high school and upper schools all instruction is departmental, that is, the work of the mathematics department differentiates itself with great clearness from the work of the English department and from that of the Latin department. The tendency to adopt this mode of organization has of late appeared more and more in elementary schools, especially in the upper grades. In defense of this mode of organization in the elementary school, it has been pointed out that departmental classes give greater freedom of adaptation of school work to individual needs. Departmental classes permit students, for example, to go forward in certain lines, even though they may have failed in others. Departmental work also makes it possible for students to elect to some extent those courses which are best adapted to their future work. Again, it is said that the instruction is more efficient because the training of the teacher and the interest of the pupil are more highly specialized. In these and other respects the upper grades of the elementary school are supposed to gain by approaching the type of organization typical of the high school.

On the other side, if we examine the college course, we find that there is great similarity between the work of the Freshman year

[1] Delivered at the Maine State Teachers' Association, October 25, 1912.

and the work of the high school. This is perhaps most strikingly illustrated by reference to the subjects of instruction. There is not an American college in existence which does not offer elementary work in modern languages, elementary work in science, elementary work in history. More and more there is a tendency for the colleges to offer elementary work in classical languages. Greek has been almost entirely carried over to the college. Even the elementary phases of Latin are now being offered in many colleges. It is difficult to determine how far this tendency will extend. Without waiting for future developments, however, we are compelled, even at the present time, to say that the Freshman year of all American colleges is just as much a stage of secondary education as is the work that is carried on in high schools.

In Germany one of the chief marks of distinction between secondary education and higher education is to be found in the fact that the secondary student is put through a required curriculum, while the student in the higher schools, especially the universities, is allowed to elect freely the courses which he wishes to pursue. In this country we have experimented extensively with the required and elective systems. It is perhaps bold to make any statement about what is generally accepted in the matter of elective courses, but there seems to be a tendency to mark off the immature student of the high school and first years of the college from the mature student of the later college years. One may venture the statement that it is characteristic of the high-school period that the student must be carefully supervised in his selection of courses, and must be guided into those courses which form a coherent curriculum. It is certainly the prevailing experience of colleges that the Freshman and Sophomore must also be guided in his selection of courses. The free elective system is successful with advanced students in the Junior and Senior years of the college, but it is certain that the Freshmen and Sophomores are not yet prepared to elect without careful supervision and guidance. In this respect, therefore, it is obvious that the first two years of college and the high school are parts of the same general period of education.

The intimate relation between the high school and the institutions above and below is so vital a fact in American education that

many movements have sprung up in different parts of the country looking toward an extension of the high school in one direction or the other. We find many high schools which induce students to stay on for work after they have graduated. These institutions are developing in the direction of what is now classified as college work. On the other hand, we find that many of the schools which aim to do secondary work as their primary function find it necessary to have a preparatory class for students who come from elementary schools which are inadequately equipped to give a complete training in the so-called common branches.

Perhaps the most significant extension downward of the domain of the secondary school is that which is coming in response to the demand for vocational education in the lower schools. Children who are not sure of going to high school must be allowed to pursue differentiated courses in the upper grades of the elementary school. The boy who is going into the trades and has no thought of high school cannot with equity be required to do the same work that is required of the boy who is going to become a clergyman and looks forward to a college education. Many boys have to make a choice between the trades and professions before they leave the seventh grade. The seventh grade must provide for such boys by adopting a type of organization similar to that now established in the high school.

The facts which have been pointed out thus far show how vague is the present definition of secondary education. They also challenge us to a thoroughgoing consideration of what is to be done in order to direct intelligently the evolution of our American school system.

I am going to venture to make the next part of my paper as concrete as possible, by referring in detail to the schools with which I am best acquainted, namely, the Elementary School and the High School of the University of Chicago. These two schools differ in some respects from the ordinary schools of like grade, but we are prepared to defend the thesis that what we do could be advantageously considered by all elementary and secondary schools. The schools are the laboratories of the Department of Education, and the business of the department is to understand as fully and

immediately as possible the opportunities of economy and co-ordination of organization.

Let me begin by commenting on the problem of organizing the English in the two schools, so as to avoid unnecessary duplication. It was found that the upper grades of the elementary school spent much time in reading some of the classics, and in studying the elements of correct composition. Most of this was repeated in the high school. Thus we had going on under our own roof work so repetitious that a child who went through the two schools repeated in the first year of the high school much that he had done in the elementary school. There is nothing so destructive to a child's interest as the thoughtless repetition in which our schools indulge. We who are older in years and patient in mind would refuse to listen to the same sermons gone over again and again. But we seem to think it our duty to make children go over the same poem or story several times. The conscientious child reads the poem at home. He comes to class and hears some other child read it. The teacher then reads it. The conscientious child now reads it again, in review, and takes an examination on it. He goes on into a higher school and a new teacher takes him in hand and announces with great enthusiasm that now this same poem will be read and studied. "Please read the poem several times at home before coming to class tomorrow!" When tomorrow comes the poem is once more read by someone, as though it had never been read before, etc., etc. One parent said to me not long ago, "My boy is now reading and studying the 'Ancient Mariner' for the third time. He read it in the eighth grade, he read it in high school, and now his class in college is taking it up!" Is it any wonder that we find students more intelligent about the working of our elective system than are we ourselves? Think of three teachers of English managing the destinies of a boy and the interests of the "Ancient Mariner" absolutely ignorant of the sphere of each other's work and influence.

We found in our schools that a little consultation between the English teachers brought out enough of these repetitions so that we were able to eliminate one year of English. We put the children who had done our eighth-grade English directly into second-year high-school English.

We found a similar situation in science. In common with the better elementary schools, ours has introduced a good deal of science work. In the first year of our high school we are giving a general science course. This we believe is also in keeping with the best practices. Yet there is lack of co-ordination here. We encountered some embarrassment in dealing with two types of students who enter our high school. There are those who come to us from schools which have very little nature-study. For such students a general first-year science course seems to have many advantages. For other students, especially those who come from schools teaching much nature-study, this first-year general course is very uninteresting, because it is so repetitious and elementary. What shall be done? The remedy seems simple, but it requires the intelligent co-operation of two schools. Let the elementary school administer much general science, let the high school take up the specialized sciences and give the student more systematic differentiated courses.

A third illustration may be drawn from our experience with language instruction. For a number of years the Elementary School of the University of Chicago has offered to students in the fourth grade and upward the opportunity of electing a modern foreign language. The student may take either French or German. Whichever language he elects, he will pursue this study during the remainder of his elementary-school course. He does not have each day as long a period of study as he will have when he comes later to take up the same subject in the high school. He does not undertake to do the same kind of work. For example, he does not, in the elementary course, emphasize grammatical study. He does however acquire the ability to pronounce the language at a period in life when it is easier for him to take on the pronunciation of a foreign language than it will be when he grows older and more fixed in his methods of pronunciation. We regard the courses in modern language as very desirable in the Elementary School. It was found difficult, however, to take advantage of the work which the children had done in the Elementary School, when these children came to the High School. The instructors in the High-School department did not know exactly what had been done in the

lower grades, and the methods which had been pursued in the lower grades were not identical with those which were used in the High School to train up introductory students. As a result many of the children who had spent four years in the Elementary School in studying modern languages were obliged to begin the work as though it were entirely new on entering the High School. This showed of course that there was no proper correlation between the two institutions. Gradually an arrangement has been worked out which has led to some modifications of the methods of teaching languages in the Elementary School, and to a very large modification in the attitude of the High-School instructor; with the result that the children now get the advantage of the work which they have done in the Elementary School. There has been absolutely no loss or omission in their education, but there has been such a recognition of the good results of the work which they have done in the Elementary School that the High School can begin its work at a higher level. Credit, if one wishes to put it that way, for a year of high-school work, can with all propriety be allowed to these children. They have done the same work that is expected of others who begin the language in the Freshman year of the High School, and they are amply qualified to go on with the higher studies in these same fields.

The problem of dealing with mathematics is somewhat more difficult, and yet it is perfectly clear to all who have been interested in the problem of organizing mathematics in the elementary and high school that a very radical change needs to be made. The elementary school certainly has the right to include in its course a great deal more constructive geometry than has heretofore been common in the elementary course. The elementary school also has a right and duty to include some of the simpler algebraical methods of procedure. The use of the simple equation, the use of the unknown quantity, can readily be taught in the grammar grades, and the ease with which these devices make it possible to solve many problems that heretofore have been solved by cumbersome arithmetical methods justifies the introduction of algebra into the elementary-school course. Still the administrative difficulties of introducing geometry and algebra into the elementary school

are very great. Last year the eighth grade of our Elementary School had progressed far enough in its work in arithmetic so that we felt justified in giving a part of the work which would ordinarily have been given in the first year of the High School.

As a result of all of the adjustments which I have described last year's eighth grade went from the Elementary School into the High School sufficiently advanced in its studies so that it could be classified as well through the first year of high-school work. The present eighth grade will go to the High School with even a larger portion of the first year's work absolved, and it is our expectation that the major part of the present seventh grade will be promoted directly into the first year of the High School. I say that a major portion of the present seventh grade will be so promoted, for it is not the intention of the school to send on children who are not qualified to do secondary work. There may be some members of the class who ought to take a longer period before they are brought to the kind of work which is ordinarily given in the high school.

One further interesting experiment is being made this year. The eighth-grade children are being offered an opportunity to take voluntarily, after the regular hours of school, some Latin work which is given to them without any requirement of home study. They are meeting one of the best Latin instructors that we have in the High School for a period each day, and with this teacher they are studying the elements of Latin.

I need hardly emphasize the importance of effecting economies of the type which have just been described, wherever such economies are possible. The pressure which is felt throughout our whole civilization for economy of time in education, certainly has commanded enough attention in recent years to be worthy of the closest attention on the part of teachers. If we can save a year of the time of elementary pupils, and bring them into the secondary school at a period a year earlier than is customary, we shall have helped to solve the urgent social question which confronts all educators.

I have illustrated my remarks by reference to our schools, but I believe the same general plan is coming in all schools. Elementary-school teachers are convinced from their experience that there is at

some point in the elementary course a waste of time and energy. There is a great deal of undue reviewing in the seventh and the eighth grades. Teachers in the seventh grade review at the end of this year in the hope that their pupils may be better prepared to go on with the work of the eighth grade. At the beginning of the eighth grade there is a long and laborious review of what has been done before, and finally, at the end of the eighth grade, there is a long period of preparation for the work of the high school. All this reviewing is wasteful. There ought to be a continuous review of the work which the children have done in earlier years, by a constant revival in ordinary routine of the principles and information which have been acquired in the earlier years. There ought never to be the necessity of a long period of review, such as is too common in our schools at the present time.

I find support for the doctrine which I have been defending in the fact that such schools as those of Concord and Berlin, New Hampshire, are making an effort to differentiate sharply between the elementary school and the high school at the end of the sixth grade. These experiments exhibit a clear conviction that the seventh and eighth grades as now organized are not satisfactory. Furthermore, in personal conference with many teachers in these grades I find a widespread feeling that the reviewing to which reference was made above is not justified. It may be that the Concord plan is the best one. There are, however, two different issues involved in the matter. First, there is a matter of actual economy of time; the second problem is the problem of better organizing the work. The change in the schools of the University of Chicago cuts out one year by avoiding repetitions. No reorganization will be finally acceptable which does not do as much. It may be advantageous to have this or that form of organization in the seventh grade, but the general school course will hardly be adequate unless it has some form of work corresponding to the present seventh grade. In other words, there is content enough to justify without waste seven years. This content should be more effectively organized, but it is extremely doubtful whether the time should be reduced below seven years. The change in the Chicago school above described is not a change of radical reorganization, it is

strictly a change effecting economy of time. The way is now open for readjustments in detail within the organization. The change which has thus far been made can be described as first of all efficient from the point of view of strict economy.

Thus far I have dealt with the problem of the high school and its extension downward. Let us turn now to the problem of extending the high school upward.

The discussion will, I believe, proceed from this point most clearly if I lay down a definite program of organization and attempt to defend this program. I am sorry not to be able to offer a concrete case where the program has been carried out, as I was able to do in dealing with the relation between high school and elementary school. The program which I wish to advocate is the fusion of the first two years of the college with the high school. The work which is now done in six years, that is, in four years of high school and two of college, can under proper organization be completed in five years. For convenience I shall speak of this five-year school as a secondary school.

It should be noted again that the subject of discussion at this point is economy of time. Assuming that no radical change is desirable in the general course to be followed by a student, there is a possibility of economical organization. The first year was saved between the elementary school and the high school; a second year can be saved between the high school and the college. When the waste in our present system is eliminated then we shall be in a position to work out readjustments of a broad type in the content of the course. The program which is now to be defended is a program of economy of one year between the high school and the college.

The first argument which I wish to present is somewhat indirect. Students who go to college under our present plan are often mentally and socially immature. The shock of readjustment is very great, and many a student loses much time and energy in the radical change in his habits of life and study. Society has recognized this fact and has attempted to make the adjustment as easy as possible for the immature student by keeping him for the first years of his college work as near home as possible. The most striking fact

which has been brought out in recent investigations is that American colleges are local institutions. The colleges of the great universities are local and the small colleges are chiefly justified in their struggle for existence by the fact that they bring the advantages of a complete education to boys and girls who could not go far away to attend college. The defense is valid, because a local institution is likely to save the student from some of the dangers of readjustment. Why not extend the advantages now provided here and there to as wide a range of people as possible? If the local college does a service when it provides that a group shall enjoy under favorable conditions an extension of high-school training, why not make the advantages of such an extension accessible to all children through an enlargement of the local institution best fitted to carry on this work? Strong public high schools ready to do the work of the Freshman and Sophomore years are the right and duty of every community. They exist today in a form which calls for very little enlargement, in all the leading centers of population in this country.

It may be said that the plan which is proposed will only put off the day of readjustment. The student going from the enlarged high school will still be obliged to meet new and exacting conditions in the higher university to which he goes. True, there will have to be a readjustment, but it will be relatively easy because the student will be more mature and more fixed in habits of concentration. Furthermore, the later years of college work are more flexible and the adjustment will be easier because the student who elects his courses with some definite end in view will not have to repeat at the arbitrary demand of the Freshman instructor the English and the science and the history which are now regarded as necessary to complete a general education.

The second argument against our present organization is much more direct. Consider the educational waste and lack of coordination which is exhibited every year, when colleges admit students with conditions. A student admitted with conditions is a living evidence that secondary education is to be completed in the college under a system of instruction which is not frankly and fully organized for that purpose. A college which accepts such a student

is saying something like this: "The subject in which you are not prepared is indeed stated in our catalogue to be a logical and necessary preliminary to our higher work, but we are a good deal in doubt about the truth of what is said in our catalogue. If you will consent to take the major risk, and let us remind you from time to time that you are probably unable to do our work, we will accept your tuition and admit you to our classes and undertake from now on to organize your course." It would be most wholesome for college faculties to go into the details of the cases of conditioned students. Sometimes the fact is that the conditioned boy is strong in mind and body. Perhaps he discovered in high school that he has a future. He will be an honored alumnus of any college that knows enough to let him in. Why talk about him as conditioned? Why not say frankly that his training of the secondary or general type is incomplete and frankly provide that he shall take first what he needs, namely, training of a secondary and general type? The trouble now is that we talk as though his secondary training were completed; we let him into the college family, and keep reminding him that his adoption is of doubtful legality and of uncertain wisdom.

Another type of conditioned student is he who is not strong in mind or body. He is let in and is told to make bricks without straw. He is known to be unequipped with the rudiments, and is confused and worn out. He must meet at the same time both the usual requirements of regular work, and also the requirements growing out of his unpassed entrance requirements. His confusion blossoms into mental chaos, and then our educational machine cuts him off. When will colleges realize that an inadequately prepared student, inadequately taken care of in his first year, and ejected with all the pomp and circumstance of a faculty vote, is an evidence of institutional imbecility rather than of student failure?

Third, I wish to suggest in several of the departments of instruction problems which grow out of our present lack of unity of organization. It is a very striking fact that a large number of students fail in high-school mathematics. I have some statistics from schools in the northern part of Illinois which I judge from many indications to be typical of high schools over the whole country,

and these statistics show from 20 to 40 per cent of failures in algebra. The failures in this subject are out of all proportion to the failures in other subjects. Their meaning is perfectly clear. Algebra as taught does not belong where it is now put into the course of study. Yet it is almost impossible to get it moved, because tradition is so strong. Conversely, geometry has become fixed in the latter part of the high-school course. It belongs earlier. It got into its present form and into its present place on the program through its alliance with formal logic. The whole problem of mathematical instruction ought to be restudied with a free right and purpose on the part of those who teach it to move certain parts of this science up into the present college years, and put back part even into the elementary school.

As for language, some comments have already been made on this subject. It is the worst kind of educational folly to put the elements of any language which is to be taught for general purposes into the college course, and administer them from the point of view of philological science. If languages are to be acquired, they ought to be acquired at the very latest during the secondary period. They ought to be taught by people who will concern themselves with the study of proper methods and devices for teaching elementary language. In short, the colleges as now organized ought not to teach elementary languages. American students in Germany find that the whole matter of language instruction in that country is managed differently and more efficiently than we manage it here.

When it comes to the classics, one hesitates to offer any comment lest he should be regarded as intruding upon sacred ground. Greek teachers have nearly succeeded in arranging it so that there is little occasion to speak of that subject outside the Classical Association. Latin teachers are beginning to feel the pressure of the competition of the modern languages. Why doesn't someone who has the temerity to offer advice to these sometime autocrats of the high-school course suggest that Latin ought to begin earlier and ought to be made the key to all classical culture through the grafting on during the third and fourth year of enough Greek to give the ordinary student all that he wants of Greek, namely, an opportunity to know in a very introductory way what the language of

Homer is like? This compromise with the common people is not unlikely to bring a few specialists to the further study of classics as in the good old days. Otherwise the failure of the classicists to apprehend the meaning of secondary education is likely to become a historical monument to the fate of those who do not understand their opportunity.

One might discuss the courses in history and science, showing how these subjects must be adapted to the needs of the non-specializing general student. But the limits of this paper make it advisable to turn at once to the problem of instruction in the practical arts and applied sciences. Vocational education is our great unsolved problem at the present time. There are some who rise up and tell us that we should solve this problem by organizing separate schools. These prophets of division tell us that there are among our people some who are to look forward only to the simpler activities of life. For these there must be some kind of retreat where the sound of the hammer and the loom may alone be heard, where the softer voices of history and science shall be inaudible in the midst of the real activities of industry. These divisionists seem to be in doubt about the date when the laborers are to be counted out and sent to their special training school, but on the whole the date which they set seems to coincide roughly with that of the beginning of secondary education. Is it not a pity that these specialists in industry should deprive some of the boys and girls who are to stay in the conventional high school of their natural right to apply knowledge with their own hands? I make no plea at this moment for the cultural education of the worker; I make a plea rather for the opportunities of application of knowledge for every learner. Let the higher institutions be the homes of that absorbing specialization which is, I believe, necessary for the development of science; but let secondary education be the sphere of general training in the facts of civilization, the facts of science, and no less in the applications of knowledge. I should give another year to the wise men and women who know how to study the needs of adolescent youths and maidens. I should say to the secondary teachers: Begin anew and work out without fear or favor the whole problem of general education. When our high schools

are increasing in attendance at the rate of 100 per cent in a little more than a decade, that fact means that secondary education is a problem in itself. We cannot subordinate this problem to the single problem of advanced special study, either professional or industrial. If secondary education is a sphere of general education, to be organized in terms of its own conditioning requirements, then what is clearer than the conclusion that industry has a rightful place in every curriculum? He is narrow in his view who would specialize the institution because the individual must be trained to specialize. My contention is that the institution should be made comprehensive in order that it may guide the individual with large facilities at its command. In some quarters our higher institutions of learning made the mistake of specializing too highly. We have as a result today the spectacle of state after state trying to devise some machinery which will unite in productive harmony the agricultural college, the engineering school, and the schools of pure science. We have reached a period of rapid expansion of our secondary schools; can we not see broadly enough to organize these great institutions so that they shall comprehend all that belongs within a single scheme of secondary education? I believe we can and shall. The secondary school ought to reach down and take the child who is now wasting time in the eighth grade. It ought to expand so as to give instruction to the immature students who are now working in the first two years of college. It ought to render the whole organization so much more economical than it is now that time shall be saved for the student, while at the same time the course is greatly enriched. This new secondary school will solve many problems which have been waiting to be recognized. For example, children will be taught how to study, not told to go home and find out how to study. Children will be taught the value of books as sources of suggestions for real life. They will learn here that industry is both skill and applied science and that pure science is the first step toward practical life. One could go on mentioning other achievements which are sure to crown this new secondary school.

I dare say there are some who will not share my optimistic enthusiasm. They will say: How can people be expected to take

on all this training? I pointed out above, you will remember, that with proper economy of organization the program can be carried out at most in seven years of elementary schooling and five of secondary. I should advocate if time permitted that vacations ought to be cut down and the school day lengthened. All this could be done if we put in some handwork and outdoor work to break the monotony of the present highly specialized program. We could have one-year courses and two-year courses for students of limited opportunity. The program which I have defended is not a plea for a limited organization, but rather a plea for a study of the whole broad field of secondary education. It is a program intended to overcome the difficulties which arise out of the fact that several different kinds of people are doing little parts of the work, and duplicating each other's efforts very unintelligently, quarreling about interests which are too vital to be left unadjusted, wasting that which is of the most value, namely, human energy and opportunity.

THE SECOND YEAR OF A MODERN LANGUAGE[1]

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When our honored President, Professor Barnes, wrote me, a month or so ago, inviting me to speak to you about the work of the second year in the modern languages, I was not sure that my official position as state inspector might not make it inadvisable for me to discuss the work which I am called upon to supervise, especially since we are now in a period of transition and change from the old translation method to at least a modified form of the direct method. I finally decided to accept the kind invitation of your president in the spirit in which it was tendered, but I beg leave to imitate Maître Jacques of the *Avare*, who was, you remember, now *cocher*, now *cuisinier*. I should like to lay aside my character of coachman of the state modern-language coach, and assume the character of cook, or chef, though with no aspirations for the *cordon bleu*, and try to serve up to you a second-year course, fairly complete from the *hors-d'œuvres* to the *café noir!*

Perhaps I ought to say a few words to you about the first year's work, not because this subject was not adequately treated by Mr. Host at your last meeting, but merely to recall to your minds the main features of that excellent discussion by my esteemed colleague. You will remember that Mr. Host stressed heavily (1) drill in pronunciation and practice in oral reading, and (2) the acquisition of a rather large vocabulary of the most common words and phrases, together with an accurate and ready knowledge of the main facts of the grammar, i.e., declensions, conjugations, and applied syntax. For this purpose the ordinary grammar or lesson-book, in conjunction with an easy reader, serves admirably. There should be no attempt to imitate the European reformers, with their pre-grammatical stage, where no grammar is taught, nor yet in their inductive, or rather pseudo-inductive teaching of the

[1] Address delivered before the Eastern Section of the New York State Modern Language Association, Union College, Schenectady, New York, April 27, 1912.

grammar. That sort of thing is all well enough in German and French schools, where conditions make it advisable and insure its successful operation; it is, however, quite out of place in our short courses and under our peculiar conditions. What we want is a time-saver, and not a time-waster; and of all the spendthrifts the so-called inductive method is the worst. Where it can and should be used is in the second and third year, rather than in the first, after the fundamentals have been mastered; for the use of the inductive method is, strictly speaking, the province of the scholar rather than of the learner. What we wish, in our first-year course, is the speediest and most solid preparation for the reading of French and German; and for that, pronunciation, knowledge of forms, a fair vocabulary, and some notion of syntax are quite necessary. Where the great majority of our pupils take but two years of a modern language it seems to me little short of criminal to dawdle over the work in a pre-grammatical, propaedeutical, or pseudo-inductive course.

The first thing that I should do with a class that came to me in second-year German or French would be, if I had not taught the pupils in the first year, to find out what they are and what they know by giving a series of oral and written reviews, for a week or ten days, on the work of the first year. That would enable me to kill two or three birds with one stone. It would call fresh to the minds of the pupils the work of the first year; it would enable me to get a line on the pupils' character, mental and moral; it would adequately test the previous work of the pupils, and the teachers from whom they came. I should then know my pupils, and there can be no really good teaching without this preliminary knowledge. I should thereafter know what pupils I could teach *en masse*, as a class, and what pupils I should have to teach individually, both in class and after school-hours. Teachers should remember that it is as much their business in a democratic school system to minister to the needs of the one-hundredth sheep and the one-hundredth goat, and according to their individual needs, as it is to the ninety-and-nine good sheep; and it is quite as well to consider the number of the last-mentioned members of the school flock as very greatly exaggerated in the parable.

Before beginning the work of the second year I should put squarely before me, in writing, if necessary, just what aim or aims I wished to attain for my pupils in scholarship and habit-formation and the best means of attaining this aim or these aims. Then, and then only, should I be in a position to judge my own work—to look upon it impersonally and call it good or bad. Yet it is surprising how few teachers do that. Most of them teach by pages, seeing only the limited day's work with the rays of a dark-lantern in the circumambient Egyptian blackness.

In the first place, the aim must be a good and worthy one, i.e., it must have an educational value, and a permanent educational value, and not merely an informational value. I do not consider that it is our business as teachers of modern languages to prepare boys to be waiters in cosmopolitan hotels and restaurants or interpreters in cosmopolitan police courts. Nor should we make it our business to teach them the trivial and superficial facts of the tourist's observation—that German men drink beer and smoke prodigiously, and that German women drink altogether too much coffee; that the Germans eat five times a day, or that butter does not appear on the table for dinner, etc., *ad nauseam*. At least one German reader contains about two hundred pages of just such insipid stuff. I have no patience with such hand-made products of the American tourist; at least not for use in the classroom. If *Realien* are to form a part of the instruction, let them be in the form of maps, pictures, anecdotes, etc., introduced at the proper psychological moment by the teacher. What I wish to put into the hands of my pupils is, not a guidebook or a tourist's book of anecdotes, but real literature; something, emanating from the imagination of a German or French author, to appeal to the imagination of my pupils. Do not misunderstand me: I do not mean the severe classical literature of the Lessing-Goethe-Schiller type, at this stage of the pupil's progress, but the simpler forms of literature. All that I ask is that they be simple, interesting, imaginative, and worth while in content. With this as my material I should aim to have my pupils read a lot, read intelligently and appreciatively, and acquire, through reading, the habit and the love of reading.

In the second place, no aim is practical unless it is practicable.

I don't care how worthy and how ideally commendable your aim may be, if you cannot ordinarily attain it, you should discard it. How often I have listened with an almost vicious impatience to would-be reformers proclaiming as the aim of modern-language teaching "a speaking knowledge" of the language, and basing their argument upon their own experience when they went to Germany or France. As though more than one in five thousand of our pupils would ever see France or Germany! Again I must request that you do not misunderstand me: I am not arguing against oral work, not in the least. On the contrary, I am very much in favor of it; it is indispensable, psychologically and pedagogically, in right teaching. But that is vastly different from taking as the aim of our instruction "a speaking knowledge" of the language, and I make bold to say that if you fail to look upon this matter rightly your whole instruction will soon be vitiated. Keep the worthy and really attainable "reading knowledge" as the aim of your instruction, with a full realization of the psychological and pedagogical reasons for the oral work as an aid to the attainment of that aim, always in mind, and your method will follow as the night follows day. Speaking the language, hearing it spoken, explaining the text in the foreign tongue, etc., not only aid the memory very greatly by providing an extra vantage-point of association, but they alone give *Sprachgefühl* and make possible a higher and more delicate appreciation of the literature. I should advise, therefore, very strongly that the foreign language be, in the second year, the language of the classroom, not only for all the various activities of the teacher, such as the assignment of the lessons, commendation and criticism of work, commands, etc., but also for the interpretation of the text read.

I must confess that the trend of modern-language teaching in some quarters of the state would seem to indicate that translation was about to be abolished. In two teachers' meetings of the last six months I have heard it advocated that texts with vocabularies should go, and that dictionaries in one language be substituted. I think that it is a mistaken direction for reforming our modern-language work, and I prophesy that, if this direction is ever largely followed, it will end in a return to the old translation method; then

we should be back where we have been for the last twenty or thirty years; I base this prophecy on an experience which I have had repeated in a number of schools. The following is a typical example. I visited recently an excellently prepared teacher of German, saw her teach, and tested her pupils in reading aloud and in conversation. Although she was, as I have said, very well prepared to do the kind of work which the state department is trying to put into effect, her pupils made a poor showing, and she quite frankly confessed that she had tried the direct method, but had felt obliged to give it up. She found, she said, that her pupils were not working, and that what they got in the classroom did not stick. She reminded me that Viëtor's famous pamphlet had as subtitle "Ein Beitrag zur Ueberbürdungsfrage," and that, while there might be a question of overwork in German schools, there never had been, and never could be, a question of overwork in American schools. On the contrary, our question always had been, and always would be, probably, how to get a fair measure of work out of our pupils. With the direct method, her pupils, she knew, were losing the advantages of good habit-formation, mental discipline, and training in English expression, which constitute the very definite and attainable results of the old method, and were not getting anything really worth while in either the ability to read intelligently or to speak the language accurately and fluently even in a limited circle of daily usage.

I have no doubt whatever that this teacher was right in her diagnosis, and I think that her case is typical; I disagree with her, however, in the remedy which she chose; she returned to the old translation method. That is not, in my opinion, the proper remedy. I believe the following statements to be absolutely true for modern-language teaching in American schools under existing conditions:

First: With the direct method pure and simple, without translation, we shall get nowhere, at least nowhere worth going.

Second: There will be little or no time for oral work (oral reading and conversation) if the daily reading-lesson is to be translated in the classroom; therefore

Third: We must banish from the classroom, but not from the course, translation into English (which can just as well be done at

home), and keep for the classroom the oral work (oral reading and conversation), which cannot be done at home.

The problem that confronts us, then, is this: how shall we assure ourselves that the translation has been done, and well done, as home preparation, without actually doing the work over in the classroom? I should like to propose the following devices, which I have long made use of in my classes.

First: When I assign a reading-lesson, and after I have developed whatever needs explanation in it, I require my pupils to do three things: (*a*) read the French or German aloud at home; (*b*) translate the lesson into English, using vocabulary and notes; and (*c*) study the French or German with a view to answering in the foreign language questions in French or German upon the text (content and phraseology). When I call the roll the next day, the pupils must answer either *prepared* or *unprepared* on all three things (no part-preparation is considered); I therefore put them on their honor, as the first device for securing results of home study. I do not let it go at that, however, for the simple reason that I do not wish to train boys and girls to lie, but to tell the truth.

Second: I use the following checks upon the pupil's veracity: (*a*) I make use of test-words, phrases, and idioms, the translation of which I ask from the pupils whom I, for any reason, suspect; and here, of course, an intimate knowledge of the pupil's character is of paramount importance; (*b*) I judge from the pupil's oral reading of the text (expression, intonation, grouping of words) whether he understands the text or not; (*c*) the pupil's answer (in the foreign language) to my questions in the foreign language based upon the text is a valuable check upon the quality of his preparation; and lastly (*d*) I frequently give written translation-exercises in the classroom without notice, sometimes during the last ten minutes of the hour, at other times covering an entire period, with either the same pages for translation for all pupils, or with different pages for different groups of pupils, since it is quite desirable that a pupil remember the work that he has done in the past. Indeed, I know of a German inspector who insisted that there were only three types of question in testing the work of pupils and teachers: (1) on the day's lesson—to test daily prepara-

tion; (2) on a passage chosen at random, which the pupils had done in the not too-remote past—to test thoroughness; and (3) on a passage not too far in advance—to test power.

I hate to think what would happen if we inspectors followed that method in our schools!

It is conceivable that one might object that the plan which I here propose puts all the work on the pupils and leaves nothing for the teacher to do; that objection, if it should be made, is neither just nor pertinent. In the first place, we have no *Ueberbürdungsfrage*, as I have said before; in the second place, it is the old translation method that is the line of least resistance for the teacher. She need but sit behind her desk and correct the pupil's translation; she nods and the others fall asleep. Besides, nothing that the teacher can ever do in the elementary course of a foreign language can possibly outweigh her function as a drillmaster; and the place to drill is in the classroom. In order to get time to drill she must not waste time in duplicating in the class work that can be done at home. She cannot drill her pupils by wireless, but she can make them study by wireless: by the force of her personality and the just—because uniform—strictness of her class-management. The function of the teacher as teacher, i.e., the imparting of information or the development of material for insight, should be evident just where it now is conspicuous by its absence, namely, in the assignment of lessons. Nearly all the teachers whose work I have inspected employ what I call the "fall-down-pick-me-up" method. They assign, for example, pages 22–23, and usually just when the bell for the passing of classes rings. Then, when the lesson is recited the next day, innumerable mistakes are made and carelessly corrected; that is, the pupils fall down and the teacher picks them up, only to repeat the process the next minute and every following minute. The only results of such recitations, so far as I can see, are that the pupils get into the habit of falling *gracefully* and the teacher of picking them up *patiently*—two doubtful virtues.

The place for the assignment is immediately after calling the roll. The advanced lesson should be read (in the foreign language) by the teacher—if necessary the pupils should repeat after every

sentence is read. If the pupils are well trained, chorus reading may be practiced to advantage. Difficulties in pronunciation, or unusual meanings of words, or peculiarities of diction should be noted and explained—usually in the foreign languages. Here the teacher is really teaching, and such teaching gives her the right to demand that the pupils know their lesson the next day.

After the advanced lesson has been assigned and developed, I should like to see the following features of a reading-lesson uniformly followed:

First: The day's lesson should be read in the foreign language, either by individual pupils or in chorus. I have seen classes of fifty pupils read two pages of German in chorus, all pronouncing—and pronouncing well! with proper intonation and expression—as one man. To attain such results, the teacher must have a quick ear to detect individual mistakes, and she must have rigid control of her class, to get all pupils absolutely in tact, without any levity, shirking, fooling, or incompetency, because one refractory pupil can spoil an entire class for this kind of work. By this reading the content and phraseology of the lesson is brought fresh to the pupils' minds.

Second: Translations of key-words or phrases, and explanations (in the foreign language) of work explained by the teacher the day before may well be in order now, the books still being open. Then

Third: Question- and answer-drill (in the foreign language), the books being closed. This work should be rapid and effective. No mispronunciations or wrong forms or endings should pass unnoticed, however. The teacher must get the right answer from the pupil and then sledge-hammer it into all the pupils *en masse*. The printed questions in the text should not be used for this work; that is like throwing a cold-blanket over the conversation; it becomes forced, unnatural, and besides does not really furnish aural training, since the pupils will have, in part, an eye-memory of these questions. The place for these printed questions is in the next and last feature of the daily programme, namely

Fourth: Written work. Some pupils should be sent to the board to write summaries of the work which has just been discussed orally; others, at their seats, answer in writing the printed questions

of the text. The teacher need not and should not (ordinarily) correct this paper work, though she should look it over to note the general character of the work and mark approximately. The work on the board should, however, be corrected in class, and the teacher should gauge her time accordingly. Sometimes dictation or written translation or translation from hearing might well take the place of the work under the above heading, but, at all events, it should be written work. I consider that point vital, as it is the most reliable means of controlling the other work. It "shows the pupils up" as nothing else can, and if we do not make use of it constantly we shall be training illiterates and our oral work will no longer be within the province of true education.

Having outlined the aim, the method, and some devices of the teacher's technique, I should like to say a few words about some things that I have noted in my inspection and which I should like to make the basis of warnings. The first of these is the use of the classics in the elementary course. There are still many schools reading *Wilhelm Tell*, *Minna von Barnhelm*, and *Hermann und Dorothea* in the second year. I think it much the wiser course to leave the classics for the third year, and even then not to have the whole third year taken up with them. For the second year certain well-defined principles should guide you in the choice of reading-texts. Now I do not propose to recommend textbooks, and I wish that the Committee of Twelve had not done so. For the second year the texts should be (1) narrative, rather than descriptive or dramatic (in order to afford the largest amount of conversational drill), and prose rather than poetry; (2) they should be typically German, rather than alien in characters and scenes to German life; (3) they should come within the sphere of interests of the pupils for whom they are chosen; should be rather easy, simple, imaginative, and modern.

Such general principles would exclude many of the texts now used by teachers of German and French, and, to my mind, rightly exclude them.

The second point that I wish to make is the puerility, triviality, and complete isolation from the other phases of the work shown in much of the so-called conversation in the classroom. In going

about the state nothing has so struck my attention as the idea of teachers that modern-language instruction is composed of water-tight, air-tight compartments, such as: (1) grammar, (*a*) forms, (*b*) syntax; (2) translation, (*a*) into English, (*b*) from English; (3) conversation. Almost invariably they arrange their weekly lesson-plan for the second year as follows: reading and translation, three days a week; grammar, two days; conversation, the last five or ten minutes of every reading-lesson, or a separate day is assigned for it, thus leaving two days for reading and translation. Time and again I have visited schools, only to have the teacher tell me: This is our grammar day; or, This is our translation day. Then, since it is my business to find out what I can about the teacher's oral work, I ask her if she can have some conversation. Yes, she is quite willing. And then something like the following takes place.

Teacher: "Was hast du heute morgen gegessen?"

Pupil: "Ich habe gegessen Milch und Brot und Schredded Wheat."

The teacher corrects the word order, but she has to leave the shredded wheat, because no one knows what that is in German. Then a few more questions are asked, such as, "Was siehst du aus dem Fenster?" or, "Was habe ich in der Hand?" I have two serious objections to this kind of conversation: in the first place, it is isolated, absolutely severed from all relation either to the reading or to grammatical instruction; in the second place, it is regarded by the pupils as a kind of play; it is not serious; it is amusement, pure and simple. You can easily see that, thus disconnected, it lacks naturalness, spontaneity; it is lugged in by the horns.

When I ask the teachers if they have no conversation based upon the text, they answer readily in the affirmative. I should like to hear some of that, I say. Then—a sad result of our last examination, perhaps—they say to their pupils: "Steigern Sie *gern*," "Konjugieren Sie *mögen* im Präsens des Konjunktivs," etc., or, "Was ist die Syntax von *gehen* in diesem Satz?"

Now I am not here, or anywhere, to make fun of things, but to try to have teachers get a certain point of view. The kinds of

questions that I have just noted would be all right if they were a direct and immediate outcome of the study of the text, where alone they have their *raison d'être*, where they have all the elements of naturalness and spontaneity. The time to ask for the present tense of *mögen*, subjunctive mood, is when a pupil has used the wrong form in his answer to a certain question. The time to ask what a pupil has eaten for breakfast or for dinner is when someone eats breakfast or dinner in the text which is being read; the time to talk about the trees and hills which one sees from the window of the schoolroom is when, in the text, it is a question of the landscape.

Let me illustrate. Suppose that our text is *Immensee*. The very first page gives a half-dozen different topics for discussion, all of which should be completed by the teacher. Among these topics are: (1) the weather and the seasons: *es ist ein Sommernachmittag, oder Nachmittag im Herbst;* the time of day comes in naturally, in addition to *Sonnenuntergang*, which suggests *Sonnenaufgang*, with drill on the verbs *aufgehen* and *untergehen*. If this kind of *lebendige Grammatik* is made use of, teachers and pupils will not say, as was actually said in one class which I visited in the northern part of the state: "Ich gehe auf, du gehst auf, er geht auf," etc.

In the second place, elementary ideas of the geography of Germany may be attained, if, as there should be, there is a map of Germany in the room. We are told that the old man spoke "mit einem etwas südlichen Akzent." Pupils can be told about some general differences between the North and South German speech, such as the detestable South German bilabial *w*, the tendency to make all stops into spirants and all spirants into stops, so that *gehen* sounds like *kehen* and *kehren* sounds like *gehren*, and such a simple word as *guchen* is written with both *g* and *k*. Things of such a nature brought up and riveted onto the reading lesson will never be forgotten, simply because they are taught in accordance with well-known psychological laws; they alone give life and interest to otherwise dead facts.

In the third place, there is a description of a typical *altdeutsches* house, the house-door, with its *Guckfenster*, the vestibule, the stairs, the *alte Haushälterin*, the study-room of Reinhardt, with its book-shelves and vases, the center table and *Lehnstuhl*,

the pictures on the wall, etc. How easy to bring into this scene the different rooms, *Küche, Wohnzimmer, Schlafzimmer, Stube und Kammer*, everything except the *Badezimmer*; and that can be introduced in contrasting such a house with a home in America.

This is merely an illustration, taken from one page of *Immensee;* it will serve for almost any good text. Every phase of life, from the games of children to the professions of men, even to the collection of folk-songs as a hobby, can be illustrated from *Immensee;* from the building of a house, the making of a bench, the composition of fairy tales, the life of a university student, the occupations of a gentleman-farmer, walking, running, swimming, flowers, including water-lilies, even symbolism, etc., *ad infinitum:* everything is there, if the teacher only has (1) a little imagination, (2) a little versatility, (3) a little knowledge of German language and life. And of course the same thing is true of many French texts.

Of course there must be some control of this oral work, if the pupils are to spell their words correctly. What I always have done, practically ever since I began teaching, is to make large use of the mimeograph. Such connected vocabularies can be run off on the mimeograph in a very short time and given to the pupils for review at home. There is no book that contains them in a satisfactory manner. Many such books have been written, but they are not connected with real literature, and hence are mere word-lists, dry as dust, and *geisttötend*, or they are embodied in insipid, wooden dialogues, which the pupils read first, thus getting first an eye-memory rather than an ear-memory and therefore defeating their chief aim. Personally I have no patience with these wooden dialogue-books;—wherever they are in use, the only thing that is ever done with them is to read them, with perhaps a little brute-memorizing of parts of them. The very essence of conversation and of the oral method is the unexpected, the spontaneous: the hearing of words and sentences which have not been seen and learned beforehand in the form in which they are used.

Now what about grammar? Teachers say sometimes: I cannot do that kind of work because the Regents lay so much stress upon grammar (or it may be translation). Either statement is absolutely without foundation. Teachers make them either

because they have not tried this method, or because they are incapable of following it. The method presupposes either a thoroughly independent command of the language, or very serious preparation, on the part of the teacher, of every lesson. When I first began to teach, I used to think out, or write out, fifty or seventy-five questions on the text, designed to bring out the form and content of the lesson to be read. I say form and content, because the form is important. I do not mean here questions of style, but merely sentence-structure and phraseology. A large part of my questions are grammar questions, that is, not the type mentioned above, "Steigern Sie," "Konjugieren Sie," etc., of simple forms, but their use in complete sentences. But the chief value of the conversational method in teaching grammar is the pupil's application of grammar in his answers. He uses the wrong case after a preposition: the teacher must get the right form out of him in the first place, and then pound in that knowledge for the whole class by the rapid use, with objects if convenient, of a half-dozen illustrations. Thus the pupil's vague, hazy, theoretic grammar-knowledge passes over into actual use until it becomes, at least in certain forms and expressions, automatic.

I suppose that some teachers will say that I am offending against my own test of a good aim by expecting too much of the average teacher, especially in the smaller schools. It is true, there are very many teachers of French and German who are lamentably deficient in scholarship and pedagogic technique, but the work here proposed is not for that reason impracticable. I know that many of these teachers are now eagerly reading books on method, are planning to take summer courses, or to go abroad for the vacation, or longer. Within a few years, no doubt, the general level of modern-language teaching in the state will be very appreciably raised. There are only a few, a very few, teachers who are beyond hope: those who have grown gray in the old method and whose speech-organs, in so far as possibility of change is concerned, are already affected with *rigor mortis*. They deserve all honor from you and from me, but they will, and they should, stick to the old translation method and not try to pour new wine into old bottles.

THE HILLEGAS-THORNDIKE SCALE FOR MEASUREMENT OF QUALITY IN ENGLISH COMPOSITION BY YOUNG PEOPLE

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A scale for measuring the merit of English composition by young people, prepared by Professors Hillegas and Thorndike of Teachers College, is given in Professor Thorndike's recent book, *Education*.[1] The method employed in deriving the scale is given in detail in a recent number of the *Teachers College Record*.[2] Some seven thousand compositions of young people were divided into ten classes, each roughly representing the same degree of excellence. From these classes seventy-five samples were selected. To these were added artificial samples of poorer quality than could be found in actual school work, in order to fill in the lower ranges of the proposed scale. All together the set consisted of eighty-three samples which varied from the poorest to the best by small degrees of quality. About one hundred individuals arranged these samples in the order of their excellence. From the judgments of these individuals a smaller group of twenty-seven samples was selected as containing all the important steps in quality from the poorest to the best. Two other samples were added as the investigation proceeded, to fill in gaps in the scale. Five hundred and two individuals judged these sets of samples and on the basis of their judgments the scale was derived by the method of right and wrong cases.[3] The theory of this method as applied to this study is stated as follows: "Differences that are equally often noticed are equal, unless the differences are either always or never noticed." The zero point in the scale was located by the combined judgment of twenty-eight individuals, nine of whom were "men of special

[1] Edward L. Thorndike, *Education*, The Macmillan Co., pp. 214–19.

[2] Milo B. Hillegas, Ph.D., "A Scale for the Measurement of Quality in English Composition by Young People," *Teachers College Record*, September, 1912, pp. 1–54.

[3] Fullerton and Cattel, *On the Perception of Small Differences*, p. 12.

literary ability," eleven "gifted teachers familiar with secondary education," and eight "psychologists familiar with the significance of scales and zero points in the case of intellectual abilities and products." The scale as finally formed represents the combined judgments of five hundred and fifteen individuals who read in whole or in part the material from which the scale was finally selected. The scale is as follows:

0

DEAR SIR: I write to say that it aint a square deal Schools is I say they is I went to a school. red and gree green and brown aint it hito bit I say he don't know his business not today nor yeaterday and you know it and I want Jennie to get me out.

18

the book I refer to read is Ichabod Crane, it is an grate book and I like to rede it. Ichabod Crame was a man and a man wrote a book and it is called Ichabod Crane i like it because the man called it ichabod crane when I read it for it is such a great book.

26

Advantage evils are things of tyrrany and there are many advantage evils One thing is that when they opress the people they suffer awful I think it is a terrible thing when they say that you can be hanged down or trodden down without mercy and the tyrrany does what they want there was tyrans in the revolutionary war and so they throwed off the yok.

37. SULLA AS A TYRANT

When Sulla came back from his conquest Marius had put himself consul so sulla with the army he had with him in his conquest seized the government from Marius and put himself in consul and had a list of his enemys printy and the men whoes names were on this list we beheaded.

47. DE QUINCY

First: De Quincys mother was a beautiful women and through her De-Quincy inhereted much of his genius.

His running away from school enfluenced him much as he roamed through the woods, valleys and his mind became very meditative.

The greatest enfluence of De Quincy's life was the opium habit. If it was not for this habit it is doubtful whether we would now be reading his writings.

His companions during his college course and even before that time were great enfluences. The surroundings of De Quincy were enfluences. Not

only De Quincy's habit of opium but other habits which were peculiar to his life.

His marriage to the woman which he did not especially care for.

The many well educated and noteworthy friends of De Quincy.

58. Fluellen

The passages given show the following characteristic of Fluellen: his inclination to brag, his professed knowledge of History, his complaining character, his great patriotism, pride of his leader, admired honesty, revengeful, love of fun and punishment of those who deserve it.

67. Ichabod Crane

Ichabod Crane was a schoolmaster in a place called Sleepy Hollow. He was tall and slim with broad shoulders, long arms that dangled far below his coat sleeves. His feet looked as if they might easily have been used for shovels. His nose was long and his entire frame was most loosely hung together.

77. Going Down with Victory

As we road down Lombard Street, we saw flags waving from nearly every window. I surely felt proud that day to be the driver of the gaily decorated coach. Again and again we were cheered as we drove slowly to the postmasters, to await the coming of his majestie's mail. There wasn't one of the gaily bedecked coaches that could have compared with ours, in my estimation. So with waving flags and fluttering hearts we waited for the coming of the mail and the expected tidings of victory.

When at last it did arrive the postmaster began to quickly sort the bundles, we waited anxiously. Immediately upon receiving our bundles, I lashed the horses and they responded with a jump. Out into the country we drove at reckless speed—everywhere spreading like wildfire the news, "Victory"! The exileration that we all felt was shared with the horses. Up and down grade and over bridges, we drove at breakneck speed and spreading the news at every hamlet with that one cry "Victory"! When at last we were back home again, it was with the hope that we should have another ride some day with "Victory".

83. Venus of Melos

In looking at this statue we think, not of wisdom, or power, or force, but just of beauty. She stands resting the weight of her body on one foot, and advancing the other (left) with knee bent. The posture causes the figure to sway slightly to one side, describing a fine curved line. The lower limbs are draped but the upper part of the body is uncovered. (The unfortunate loss of the statute's arms prevents a positive knowledge of its original attitude.) The eyes are partly closed, having something of a dreamy langour. The nost is perfectly cut, the mouth and chin are moulded in adorable curves.

Yet to say that every feature is of faultless perfection is but cold praise. No analysis can convey the sense of her peerless beauty.

93. A Foreigner's Tribute to Joan of Arc

Joan of Arc, worn out by the suffering that was thrust upon her, nevertheless appeared with a brave mien before the Bishop of Beauvais. She knew, had always known that she must die when her mission was fulfilled and death held no terrors for her. To all the bishop's questions she answered firmly and without hesitation. The bishop failed to confuse her and at last condemned her to death for heresy, bidding her recant if she would live. She refused and was lead to prison, from there to death.

While the flames were writhing around her she bade the old bishop who stood by her to move away or he would be injured. Her last thought was of others and De Quincy says, that recant was no more in her mind than on her lips. She died as she lived, with a prayer on her lips and listening to the voices that had whispered to her so often.

The heroism of Joan of Arc was wonderful. We do not know what form her great patriotism took or how far it really led her. She spoke of hearing voices and of seeing visions. We only know that she resolved to save her country, knowing though she did so, it would cost her her life. Yet she never hesitated. She was uneducated save for the lessons taught her by nature. Yet she led armies and crowned the dauphin, king of France. She was only a girl, yet she could silence a great bishop by words that came from her heart and from her faith. She was only a woman, yet she could die as bravely as any martyr who had gone before.

The figures above each selection in the scale represent its exact value in units of the scale extending from 0 to 93. Quality 37 ("Sulla as a Tyrant") is understood to differ from quality 47 ("De Quincy") by exactly the same amount as quality 67 ("Ichabod Crane") differs from quality 77 ("Going Down with Victory"); and quality 93 ("Venus of Melos") is understood to be just one point less than twice as good as quality 47. Professor Thorndike says:[1] "By using such scales, the absolute gain which any pupil made in any year could be measured in the same way as his gain in height, weight, wages, or pulse rate, and the results of different means and methods of teaching could be demonstrated with exactitude instead of being guessed at."

There can be no doubt of the importance of securing definite standards for the measurement of school products in place of the indefinite and widely varying standards employed in different

[1] *Education*, p. 214.

schools and by different teachers in the same school. Neither can there be any doubt regarding the elaborate pains with which this scale for the measurement of English composition has been derived. However, one who examines this scale can hardly fail at first to be skeptical regarding its practical availability for measuring the merit of so highly complex a product as the composition of young people in their teens; and those who are accustomed to scoff at the idea of a science of education will doubtless find material for ridicule in the claims made by its authors for the exactness with which this scale may be used.

For the purpose of a practical test, the author of this article submitted eight selections taken from the actual compositions of high-school pupils to forty-two teachers of English composition in a number of high schools, normal schools, and colleges, all of sufficiently high standing to make their judgments worthy of respect. The selections were also submitted to two other groups of judges, one consisting of five teachers of English in the University High School, in which an effort has been made for some time to secure uniform standards of grading; the other consisting of a class of sixteen graduate students taking a course in the statistical study of school materials in the School of Education in the University of Chicago. With the material to be graded was submitted to each a copy of the Hillegas-Thorndike scale and they were asked to grade the material carefully according to the scale and to submit their results without consultation with each other. It is probably fair to assume that these individuals were as competent to apply the scale as the average persons who could be expected to apply it in actual practice.

The material furnishing the basis of the test is given below, the different selections being designated by the letters A–H. It perhaps should be stated that selections A and B were written by members of an industrial class who had completed only six grades in an elementary school.

A

Football. The place was 50×100 ft, and there was a ten boys playing F. B. our captain was Kelley and the score was 26 to 0. Its a very interesting game because it makes the man helty.

I like to play Football or baace Ball. But I dont know how to play eather one I like to learn it.

B

The boys call out at one time, we want to play football. One boy hollars captain on one side. The game is started, and I am afraid I will get hurth. All at once I see the boys running I run to I jump on one boy. I get a goo and tight grip, and I was down on the ground.

C

Anyone trying for this Rhodes scholarship must comply to three rules. The applicant must have had two years in some college of good standing must be unmarried, and must be between nineteen and twenty one years of age.

"The rules seem quite easy for a scholarship, don't you think so girls?" asked Marion.

"Yes, but then it is not so easy as you think because there are many other applicants," replied Helen, "But continue."

Then, Mr. Porter told us about Oxford. There are twenty one colleges at Oxford, but they are shut in by a high wall and are separated from each other.

"Why! I thought Oxford contained just one large college instead of twenty-one," said Helen.

"Yes, I replied and there are a good many other things which greatly surprised me.

D

When one has a class on the third floor of Blaine Hall and one on the third floor of Belfield Hall the hour following, the five minutes allowed between classes does not make it possible for him to reach his other class on time. Now, when he is absent one day and stops the following day, after class to find out when he may make up his missed lesson he arrives at his next class late. Then perhaps, the teacher has some point she wishes to explain to him, and so retains him a moment. Maybe his locker combination will not work, or perhaps he drops his books, the result is the same in each case, he is late to class. He reaches the class room, five minutes late. He rushes in panting. For who wouldn't be breathless after running up three flights of stairs? As he enters he is confronted with "why are you late?"

To which he pants out. "Third floor of Blaine, couldn't help it."

E

Of the many points which should be taken into consideration in choosing a college, one of the most important is that of the size of the institution. I am of the opinion that it should be rather small; that is, with an undergraduate body of about two hundred and fifty students. There are a number of reasons for this. In the first place, in a small college like this, a student who has exceptional powers in any branch of interests has more opportunity to come to the fore, and make the most of himself. For example, if a man is an unusu-

ally good runner, although he does not know it, and has not been well-developed, if he is in a small college, he is more likely to go out for track and find out what he can do, than if he is in a large university, discouraged by the great number of athletes around him who are, as this student thinks, so much better than he. Thus he does not try himself out, and some excellent material is wasted. If he had been in a smaller college, he would have tried himself out, and would have developed into a runner worth while, and would have done both himself and his Alma Mater good. On the other hand, if a man is exceptionally bright, and good at his studies, if he is in a smaller college, he will have more opportunity for the individual attention of the instructors, than if he were in a large university, where, besides being distracted from his work by the multifarious interests of a large institution he is prevented from close contact with the professors who have to teach large classes and are hindered from much outside help of the students by the excessive burdens of administrative work.

F

That night, we took dinner at the hotel and, as we were not over anxious to return to scene of destruction, a bunch of us stayed at the hotel the great part of the evening. When we finally did return, we talked and chattered freely as long as we were on the regular hotel walk, but when we turned off on our path through the woods, a sad silence descended upon us. Each of us felt a peculiar fear and gloom. As we came to the place where we turned, we stopped a few minutes, knowing that we would see no welcoming lights nor hear the pleasant noise of talking. When we turned, we saw the ruins bathed in a flood of most beautiful moonlight. The moonshine vied with the strange phosphorescent glow of the ruins, themselves, in making the scene wierd, and terrible. Two men kept watch through the long night, lest the fire break out, again. The next day, with sad hearts, we left the mournful ruins for the more cheerful, if less beloved, city of Chicago.

G

Down the trail to the beach we stumbled, our only illumination the little lamp, and went along the shore, very silently, for each one was too much occupied in shivering to say anything except muttered ejaculations when he stubbed his numbed toe against a rock. Soon, however, we came out on the road, where the footing was much smoother, and here we quickened our pace. After half an hour of pretty steady climbing, we emerged from the woods, and struck a little footpath, which led across the rocky pasture land where we really began to feel the cold. The grass was heavy with the first frost, and by the time we had gone a hundred yards, our legs from the knees down were thoroughly drenched with ice-water. But by this time, most of the journey was over, the light of dawn was crawling over the sky, the clear, cheerful call of a white-throated sparrow floated down from a fir nearby, and we really began to think that early morning was a pretty good time of day, after all.

H

Here are the lockers where we kept our books. I wonder if I could open any of them. Here is the one I had during my last year in high school. I wonder who is its owner now. How does it look, in the interior. She and I kept our many belongings within, sometimes in good order, and sometimes, just before a wild and thorough cleaning, in a state of peculiar confusion. I did not like to clean it, then, but how I should enjoy going through it from top to bottom, now, and arranging the books, hers and mine, in neat rows! I try my old combination, but the locker will not open. Here is the other locker. There were four of us, in those days. The interior of this other locker used to be arranged much as ours. I wonder if the owners of these two lockers are as good friends as we four were.

The following tables give the essential features of the results obtained from the gradings of the three groups, showing the lowest grade given to each selection by a member of each group, the highest grade, the maximum variation, the average grade, and the average variation of each individual from the average grade of the entire group.

FORTY-TWO TEACHERS OF ENGLISH COMPOSITION IN HIGH SCHOOLS, COLLEGES, AND NORMAL SCHOOLS

Specimen	Lowest Grade	Highest Grade	Maximum Variation	Average Grade	Average Variation from Average Grade
A	0	40	40	17	8
B	0	47	47	20	8
C	35	86	51	53	11
D	47	85	38	71	8
E	45	100	55	85	8
F	40	93	53	75	8
G	67	97	30	84	7
H	26	95	69	80	11

SIXTEEN MEMBERS OF GRADUATE CLASS IN EDUCATIONAL TESTS. SCHOOL OF EDUCATION

Specimen	Lowest Grade	Highest Grade	Maximum Variation	Average Grade	Average Variation from Average Grade
A	15	47	32	28	11
B	18	37	19	28	6
C	26	83	57	59	15
D	38	93	55	71	13
E	32	95	63	74	8
F	65	90	25	77	6
G	67	94	27	81	7
H	47	93	46	80	11

FIVE TEACHERS IN THE ENGLISH DEPARTMENT OF THE UNIVERSITY HIGH SCHOOL

Specimen	Lowest Grade	Highest Grade	Maximum Variation	Average Grade	Average Variation from Average Grade
A	12	30	18	19	5
B	12	42	30	27	7
C	47	67	20	60	11
D	57	80	23	71	11
E	75	100	25	85	5
F	64	87	23	77	5
G	77	97	20	86	6
H	75	95	20	88	7

From this application to school material at least two criticisms of the scale may be made:

1. The scale represents the composite judgment of some five hundred individuals more or less expert as teachers of English, writers, and experts in fields that render their individual judgments worthy of respect. But the scale represents the judgment of no single individual, and the judgment of any single individual or of any group of individuals whose judgment entered into the formation of the scale such as might reasonably be expected to apply the scale to any large body of material necessary to an adequate practical test would not represent the aggregate judgment of those whose arrangement of the material formed the basis of the scale. These individuals varied widely in their judgments, placing the various selections in rather widely varying positions in the scale. But the scale cannot be used in practice by all the persons whose judgments contributed to its formation. It must be used by an individual or by a small group of individuals whose judgments may be expected to vary as widely as did those in the making of the scale. As there is no such person as the average pupil, so there is no average judgment which can be applied to a test of school products. This of course could be said of any similar test to be applied to school products and furnishes in itself no adequate reason for the rejection of this scale. It is, however, a more serious objection in the case of the composition scale because of the highly complex nature of the material to which it must be applied.

2. A more serious objection to this particular scale may be made on the ground that the material employed is not representative. In estimating the value of written composition there are two elements that may roughly be said to be of about equal value—form and content. By form we would mean such elements as correctness or freedom from mistakes of spelling, punctuation, capitalization, syntax; neatness and general good appearance; effective and pleasing sentence structure; organization of material in logically coherent units. A scale for evaluating these elements might be applied with reasonable accuracy and for this purpose the present scale may perhaps be regarded as an excellent one. By content we would mean the quality of the thought, feeling, artistic skill, effectiveness, and originality of expression. As a basis for evaluating this important element, the scale seems to be entirely inadequate. Every selection in the scale that has any thought-content at all is on a subject exceedingly formal, drawn from history or most often from readings in literature. An exception might be made of the scale number 83, "Venus of Melos," which may have been written by one who had seen a reproduction of the statue, but quite as likely by one who had read a description of the statue. One who reads the scale carefully might assume that for some reason all material involving any originality of thought had been carefully excluded. It cannot be supposed that composition subjects in any school were chosen exclusively from such a barren field as is represented by the material in this scale. Certainly no school should be expected to furnish any large amount of material on subjects so far removed from all present-day human experience. It is altogether impossible to compare compositions on subjects that offer opportunity for originality of thought and expression with the formal material found in the scale which depends for its content largely upon the memory of books read or discussed in class. The scale differs in kind from the material to be measured. It is like using a yardstick to determine the weight of material in the physical laboratory.

Good illustrations of this essential difference between the scale and the material graded may be found by a comparison of a few of the selections graded with that part of the scale to which

the average grade assigned makes them most nearly equal. Selection B is given an average quality 18 in the scale. While very crude in form, it will be observed to have a certain vividness and unity of form which the corresponding selection in the scale does not possess. The wide variations in the grading of this selection are doubtless due to the difficulty which the judges experienced in making an exact comparison of material so essentially different in content. The most marked variation occurred in the grading of selection H, in which some judges distinguished a certain fine feeling which influenced the style and gave it unity while one who gave it a very low grade evidently did not observe this excellence at all. From this inherent difficulty in measuring two such dissimilar elements as form and content in written composition, one might suggest the desirability of two scales for the determination of the value of these two elements.

A PLEA FOR OUT-OF-DOOR ZOÖLOGY

WALTER L. HAHN
St. Paul Island, Bering Sea

A practical knowledge of field zoölogy was a necessity for savage man. We may even go beyond this—it was necessary for the prehuman ancestors of man. Neither could have existed without knowing the habits and haunts of friends and foes.

With the beginning of city life the necessity for this knowledge ceased among a large part of the human race. At the present time a close acquaintance with wild forms of animate nature is limited to the naturalist, professional or amateur, the sportsman, and in some degree, the farmer.

Among professional zoölogists, knowledge of living animals in their native haunts is often slight. Indeed, there is a group of zoölogists who deride the study of higher forms of animals under natural conditions as "vague," "unscientific," and "worthless." It is undeniable that such studies are often vague and unsatisfactory, for they are often extremely difficult. Worthless they cannot be if they are extensive and made with care and understanding. For the final test of every biological theory is, "Will it work when applied to the living creature?"

Perhaps I should state that my plea is intended for the student rather than the teacher. The out-of-doors would be the ideal place to teach zoölogy under ideal conditions. In a school where the subject is sandwiched in between the rest of the curriculum, where classes are large, and where there is only a limited daily period in which it can be taught, the teacher must weigh the discipline of the laboratory against the interest of the field; and the former will usually preponderate.

I also desire that nothing that I may say here shall be understood as a disparagement of the microscopist, the experimentalist or the systematist whose work is chiefly indoors. They have contributed much to our understanding of the great general prob-

lems of heredity, evolution, and development, as well as to preventive medicine and various other intensely practical questions.

To accomplish anything in the way of microscopical and experimental research it is necessary to have microscopes, reagents, and various other forms of expensive laboratory apparatus, as well as a thorough knowledge of technique, and sufficient time for long and close application. Systematic research, at the present time, requires access to large collections which must be well arranged and well housed. Nor can much be done in the way of systematic study without a very considerable library containing rare and expensive books.

The equipment for the study of zoölogy out of doors is far less expensive. This does not mean that books are unnecessary or that a small amount of knowledge will suffice. In no branch of science is there more need for keener perceptions, better judgment, and wider scope of information than in the study of living animals. But the monetary outlay needed for such study is very small, and the opportunity is open to everyone who has frequent access to a bit of woodland, pond, lake, or stream. And if he fails to accomplish much in the way of research he will at least have healthful recreation and a great deal of genuine pleasure.

It is not the purpose of this paper to enter into the technique of collecting specimens for museum purposes, although this has been, and still is, one of the most important lines of field work in zoölogy. Information on methods of collecting and preserving can be obtained from the National Museum, the Department of Agriculture, or in various books that are on the market. Neither do I enter a plea for studies that shall be made exclusively in the open, unchecked by observations in the laboratory or by familiarity with the work of others along the same line.

The study of living animals may be carried on along three general lines: the development and growth of the individual (ontogeny); habits, instincts, and senses (psychology); relation to the environment (ecology). It is not often desirable to make a sharp distinction between these different lines of investigation when we are making a study of living species of the fauna of a given area, and no such distinction will be made here.

The life of any animal might be considered under the following heads:

The span of life: Development, including changes in appearance with growth; age attained under normal conditions; condition of life during old age.

Breeding habits: Age at which the reproductive functions became active; secondary sexual characters; number of offspring; season when offspring are born; period of gestation; care of young by parents; number of mates during the lifetime of the animal; site of home; character of nest if any is made.

Food: Kinds preferred; kinds available that are sometimes eaten; quantity necessary; quantity available in a given area.

General activities: Does the animal hibernate? If so, how long? Is hibernation affected by the weather? Range of the individual in one day, and during its lifetime.

Mental traits: Cunning; adaptability; teachability.

Senses: General development; senses used in procuring food, in recognizing mates, in finding the way home.

Enemies: Kinds; number.

Relation to physical environment: Effect of weather; of severe droughts; floods; severe cold; unusual heat.

The above list is merely a suggestive outline; yet all of the topics included in it have not been carefully studied for a single wild animal, and there is hardly one of these points that has been carefully studied for some of our commonest species.

It would not be necessary to discuss in detail the methods of studying each of these problems, even if I were competent to do so, but it may be worth while to suggest a few problems more specifically and indicate some methods of investigation in this field.

Much can be learned about an animal by keeping it in captivity under conditions that are as nearly as possible like its natural surroundings. Even under the best of artificial conditions it is necessary to make some allowance for abnormal changes in behavior due to changes in environment, and every study of a captive animal should be checked as far as possible by observation of its unconfined relatives.

If a captive animal has room for exercise and becomes sufficiently accustomed to its surroundings to eat well, it is reasonable to assume that its appetite will remain normal. It is easily possible to measure its food and to determine its food preferences by actual

tests. Captive animals will also furnish information in regard to the breeding habits, family life, and longevity of their race; but these things are apt to be more affected by the abnormal conditions of captivity than is the animal's appetite.

For the study of mental traits and sense development of animals it is necessary to become familiar with some of the recent literature of comparative psychology and animal behavior before drawing conclusions; but it is also very desirable that the laboratory methods employed by students of animal psychology should be supplemented by close observation of the animals in their natural environment. Anecdotes relating the wonderful intelligence or fidelity of an animal whose history is unknown are no longer considered scientific literature. In the field of animal psychology there is also special need for the careful study of the development of the senses and mental life, and of the awakening of hereditary instincts in young animals.

An excellent and little-appreciated means of getting information concerning the general activities of some animals is the study of their tracks in the snow. By seizing upon a favorable opportunity, when snow lies fresh and soft and where it is little disturbed by animals or men, one can follow the tracks of an animal, say a mink or a weasel, and learn its nightly range, where it has turned aside from its path and why, what it has eaten, and whether it has traveled singly or in company. This may be a muscle-tiring task, for most carnivorous animals range far in a night. The snow records of wood mice and shrews are also good indexes of their activity and of their enemies. Tracks of rabbits help one to learn what the animals have been eating, but, on account of their great number and erratic character, have less value than those of some other animals. Even birds leave tracks in the snow that show their favorite haunts and indicate the source of their winter food.

A most interesting study, although not a new one, is the ecology of some group of animals within a limited area of varied character. Suppose it is birds we are studying and we have a convenient area of, say, a square mile, marked off by roads or streams or some other definite boundaries. The area, to be most attractive, should contain a house and its grounds, cultivated fields, meadow, brushy

pasture, wood lot, and swamp, though all of these are not necessary. What birds regularly nest in each division? Is a species restricted to one division in its nesting site, and, if it is at all restricted, is this because of enemies, lack of material for building nest, suitable spot to place the nest, or some other reason? Does it feed in the same area in which it nests, and on what does it feed? To what extent does it wander into the tracts which it does not regularly inhabit? What is the relative abundance of birds in each tract? As an answer to the last question a guess is worse than useless, and the only way to answer it is to take a census of the entire area on several different days, checking up the results and making such allowance for error as experience seems to dictate.

A similar study could be made of the small mammals, using snow records, trapping, and frequent observation as the means of getting data.

Batrachians are also of great interest when studied in relation to their environment. How many frogs and toads frequent a given pond during the breeding season? Do they prefer one body of water to another equally accessible, and if so, why? What becomes of them after the breeding season? What are the details of growth and the transformation changes accompanying growth? These are a few of the many problems awaiting study among the batrachians.

I have not alluded to reptiles and fishes, nor to any of the invertebrates, not because they do not offer many problems of great biological interest, but chiefly because they are less familiar to me and there is not space to discuss all.

The last century has been rich in biological discoveries, but as yet we have learned only a line here and there in the great book of life. The microscope, the scalpel, and the museum can teach us much of what is left, but there are many pages that can be read with pleasure and profit in the open.

EDUCATIONAL NEWS AND EDITORIAL COMMENT

OBSERVATIONS ON THE NEW ORDER IN HIGH SCHOOLS

It ought to hearten any teacher to note the changes which are taking place in our methods of teaching, particularly in the secondary school. The writer has been observing the new order in a high school with which he is well acquainted. Five years ago German was taught to beginners in this school very largely from a grammatical textbook. After two years of instruction, the typical pupil could read a little classical German, but he could not read even this very readily or with genuine enjoyment. But today, in this same high school, pupils are at the outset introduced to spoken German, and they are required to speak it, to read it, and to write it almost from the beginning. They are now about as facile in the use of the language after six weeks of instruction as they formerly were after two years of grammatical drill.

Again, in the high school referred to, civics was taught five years ago mainly from a formal book which dealt with government wholly on the structural side. The divisions of the government, the officers, and their duties, were learned "by heart," and the Constitution was memorized; but very little was gained respecting government as it affected the pupil in his everyday life. However, this year the study of civics has been carried on by having pupils find out at first hand how their own city is governed in all its interests and activities. The pupils are required to go straight to the sources of information and discover how the expenses of government are provided for; how officers are chosen; and so on through a large number of interesting and exceedingly practical problems. Ordinarily, young people are not enthusiastic over the study of civics, but there is a marked change in their attitude in the high school in question this year.

Five years ago the pupils in English classes memorized rhetorical rules, and read over examples in which they were embodied. Occasionally they would write a theme in the attempt to apply the rules which they had learned. Today they are reading entire selections illustrating effective modes of expression, and they are writing a good deal with a view to expressing themselves on familiar subjects in a direct, clear, and pleasing manner. Five years ago algebra was taught as a purely formal, symbolical subject. But now there is considerable improvement, since

pupils are constantly solving practical problems which have a more or less direct bearing upon everyday affairs, though we think still further improvement can be made in regard to this subject.

We might go through with practically all of the subjects taught in this high school and show radical and encouraging reform in the way of employing vital and effective methods of teaching. The aim of making teaching *go to the mark*, in the sense that it will enable the pupil without waste of time or energy to get a subject as it will be of service in real life, is apparently coming to be accepted and generally practiced by teachers in the high school.

M. V. O'SHEA

NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION

The annual conference of the National Society for the Promotion of Industrial Education was held in Philadelphia December 5, 6, and 7.

The meetings were well attended and gave evidence of an ever-increasing popular interest in the work which this Society is organized to advance. Over three hundred sat down to the banquet at which the chief attraction was an address by Senator Page on Senate Bill No. 3, known as the Page Vocational Bill, which provides federal aid for vocational instruction in agriculture, homemaking, and the industrial arts.

The programs of the several sessions were full and varied, but three phases of the general problem recurred frequently. These were the need of specially trained teachers; the relation of vocational education to the regular school system; and the necessity of state aid in establishing and maintaining vocational schools or departments.

One of the most important events of the conference was the meeting of a special committee to formulate a statement of principles which should govern state legislation relating to vocational education. The membership of this committee was representative of the manufacturing interests, of social organizations, of state and city systems of education and of higher educational institutions.

Incidental to the discussion was the examination of the new bills proposed by Pennsylvania and Indiana. The latter bill is the work of the Indiana Commission on Industrial and Agricultural Education and, if enacted as is confidently expected, it will give Indiana the most comprehensive provisions for education in agriculture and the domestic and industrial arts of any state in the country.

Throughout the discussion it was evident that the most important

of all questions was that relating to the local administration and control of vocational education, and especially as to whether it should be dominated by the educational or the vocational interests. This involved the question whether vocational training should be under the regular boards of education or under boards specially appointed to promote and control such education. The following quotation, from the statement of principles adopted, clearly indicates the conclusions of the committee regarding this important question:

> Effective administrative control on the part of the local community of both vocational and general education requires the existence of a local board or committee possessed of ample power to establish and maintain under proper state supervision general and vocational schools. When the existing local administrative authority for general education does not provide for the establishment and promotion of adequate vocational education, legislative provision should exist enabling industrial and other occupational interests, under proper restrictions, to procure the creation of a special board of control for vocational education.

Copies of the complete statement of the Society regarding the principles and policies that should underlie state legislation for a state system of vocational education may be had by applying to Secretary C. A. Prosser, 105 East 22d Street, New York City.

VOCATIONAL GUIDANCE

The organization of a new national society was effected at Philadelphia by a committee appointed during the recent conference on vocational guidance held in New York City. This society will have for its purpose the advancement of vocational guidance. It will work in close co-operation with the National Society for the Promotion of Industrial Education, until such time as that society may feel disposed to take up this work as a part of its own general purpose. More information regarding this new society will be given later, when its organization has been completed.

FRANK M. LEAVITT

VERMONT DEALING WITH THE GENERAL PROBLEM OF EDUCATIONAL ORGANIZATION

The governor of Vermont in a recent message to the legislature recommended a general commission to take up the problems of education in that state. Quoting from his message, the following paragraph sets forth the needs of such an inquiry:

In view of the fact that the superintendents and principals responsible for the direction of the elementary and secondary schools of the state have proposed legislation for the improvement of our common schools, it would seem wise to proceed still farther. Our institutions of higher learning, with each returning biennial session of the general assembly, are requesting larger appropriations for support and maintenance, and it is important that the status of these institutions in relation to the state shall be clearly and speedily established. I therefore recommend that an education commission be created whose duty it shall be to inquire into the subject of public education in Vermont. I further recommend that this commission report at the earliest possible date on the several necessities of the University of Vermont and State Agricultural College, Middlebury College, and Norwich University, with such recommendations as will prevent unnecessary duplication. As soon as possible after making investigation of the institutions of learning, the commission shall recommend, by bill or otherwise, such organizations of the educational and secondary schools of the state in adjustment to the entire educational system of the state as will promote the ends of economy, harmony, and unity.

This message is of interest in connection with one of the notes which was inserted in the last number of the *School Review*. Attention was there drawn to the fact that the state of Iowa has found it necessary to make some readjustments between the state institutions of learning, so that there shall be no conflict and duplication within these various institutions. The state of Vermont evidently finds itself confronted by very similar problems, and is taking at this early date some measures to relieve the probable duplication of work in the various institutions.

The same type of problem that has confronted Iowa and is now confronting Vermont is so common throughout the states of the Union that it will be of interest to note from time to time the methods adopted by the various states to overcome these embarrassing duplications in educational organization.

THE ORGANIZATION OF PERIODS OF STUDY IN HIGH SCHOOL

The township high school in DeKalb, Ill., has adopted a method of dealing with the problem of supervised study within the high school. There are six regular periods of recitations within the school program. The school opens at 8:50 in the morning and closes at 3:25. Between the third and fourth periods in the forenoon, and between the first and last periods of the afternoon program, periods are interpolated which can be used for general purposes and for supervised study. The morning period is devoted to such matters as vocational guidance, general assembly, and other general purposes of the school. The afternoon

period is a study period. On Monday those classes which recite during the first period in the morning go to the rooms where they ordinarily recite during the first period, and there they meet the teachers, who help them study. On Tuesday the classes go to the rooms where they recite during the second period in the morning. Here they have an opportunity to study a different type of lesson from that which they took up on Monday. By distributing these study periods during two successive weeks, each pupil comes in contact with every teacher with whom he has work.

Some method of solving this general problem of high-school study certainly must be worked out. Whether the students shall do the work in the regular class, or shall have an opportunity of the sort which is here described, is a matter of detail of organization. It is hoped that after the experiment has been tried at the DeKalb township high school for some time, the members of the high-school staff may be persuaded to give an account of their experiences. In the meantime other experiments of the sort would be very interesting to all high-school teachers, and it is hoped that the insertion of this note among the general news items may draw out other information of a similar type.

THE NEW YORK INVESTIGATION

The history of the New York Educational Investigation is of more than passing interest to every citizen and especially to every teacher in the country. The inquiry may be said to have originated in a widespread impression that the expenditure of $27,000,000, which was the amount of the New York school budget when the movement began, and the large increase in this amount which was asked by the Board of Education, needed the most careful scrutiny. There is always ground, apparent or real, for considering the advisability of the reorganization of the school system of a great city. Sometimes supervision seems overorganized and ineffective. Sometimes school opportunities do not seem to be equitably distributed. The people have a right to ask at all times for the evidences of efficiency and for suggestions which will correct existing defects.

It happened in New York that one of the natural avenues for the expression of this demand that school expenditures be scrutinized was the Bureau of Municipal Research. The head of this bureau, Mr. Allen, has figured in the investigation and in the subsequent disagreements to such an extent that he must be recognized in order that the present

situation may be understood. Mr. Allen is a destructive critic of the present school system and of the present superintendent of schools in New York. The resources of the bureau have time and time again been used to give wide publicity, not merely to facts about the New York system, but to adverse conclusions already reached. In short, Mr. Allen has decided that Superintendent Maxwell is incompetent, and means to have this decision accepted if possible.

Mr. Allen succeeded in impressing, among others, Mr. Mitchel, president of the Board of Aldermen of New York, with the result that Mr. Mitchel and his colleagues on the Board of Estimate felt that an inquiry must be made into New York school conditions. The Board of Estimate appointed a committee consisting of Mr. Mitchel, Mr. Prendergast, comptroller of the city, and Mr. Miller, president of the Borough of the Bronx, to organize such an inquiry.

At this point the interesting fact developed that the conduct of an educational inquiry is a complicated matter. The committee consulted with a number of educators in the effort to find out what they ought to do. The present writer may be permitted to contribute his personal experiences. He went to New York on the invitation of Mr. Mitchel. He was taken by Mr. Mitchel's aide to the Bureau of Municipal Research, where the longest and most exhaustive discussion that he had of the expected inquiry was carried on. Afterward he met Mr. Mitchel for a short time and took luncheon with Mr. Mitchel, Mr. Prendergast, Mr. Allen, and one other gentleman whom he has forgotten, but who had no official relation to the inquiry. The impression that the present writer gathered during that visit to New York was that Mr. Allen was a factor in the inquiry more interested and influential than any of the city officials. He gathered the impression that the success of the inquiry was in serious jeopardy because of the influences surrounding it and because of the existing conclusions in the minds of those in contact with the inquiry. He held then and holds now that an inquiry of this type is and ought to be most significant for education. He holds that its methods ought to be scientific and not personal.

The outcome of many conferences of the type to which the writer was introduced was the engagement of Professor Hanus of Harvard to conduct an educational inquiry. Professor Hanus will sooner or later, it is to be hoped, give a frank and full statement of his experiences. It is generally known that as soon as he reached New York he encountered obstacle after obstacle. The mayor called in question the legality of the investigation. The committee of the Board of Estimate demanded that

information be instantly furnished as a basis for criticizing the budget of the Board of Education. The head of the Bureau of Municipal Research expressed in public his dissatisfaction with the methods of the inquiry. In short, confusion was made as confounding as possible. In the meantime Professor Hanus went forward with firmness and with the kind of impersonal candor which brings to him the confidence of educational workers. He gathered some of the best students of education in the country and went about his difficult task. Reports were ultimately written and turned in. These have not yet been published.

Here opens a new chapter. Among the reports was that of Professor Moore of Yale. Professor Moore's report contained, along with other matter, a sharp criticism of the Board of Estimate for interfering with the charter rights of the Board of Education, which is empowered to "have the management and control of the public schools and of the public-school system of the city, subject to the general statutes of the state relating to public-school instruction and to the provisions of this act." It is the contention of Professor Moore that the Board of Education is deprived of its rights through the indirect control assumed by the Board of Estimate and by other municipal agencies. The *Independent* of November 14 contains a full statement by Professor Moore of his position on this and other matters. When Professor Moore's report was read by Mr. Mitchel and his colleagues they were not pleased. They sent to Professor Moore many questions and finally refused to accept or print the report. This brought the report more attention than it could otherwise have hoped to command.

Note some of the types of publicity given to the matter. Here is a letter from Professor Hanus to the editor of the *New York Globe:*

School Editor of "The Globe":

SIR: I have just received a letter from the committee on school inquiry dated October 31, 1912, informing me that the committee has rejected Professor Moore's report. In several New York papers of October 31 and November 1, your paper included, I have read accounts of the report made by the committee on school inquiry to the Board of Estimate and Apportionment. The condemnation in public of Professor Moore's report, in advance of its publication, is as unjust as is the condemnation of the report itself. Professor Moore's report is exceptionally valuable.

If the people of New York City accept the judgment of the committee on school inquiry without insisting that Professor Moore's complete report be allowed to speak for itself in published form, crying evils in the administration of the schools of the city will not be seen in the light in which they should be

seen, and such evils are therefore likely to continue, to the great disadvantage of the city.

The account of a conversation that I had with President Mitchel about Professor Moore's eligibility for the work to which he was assigned is almost pure fiction. I had been told by a close friend of President Mitchel that Professor Moore ought not to have any share in the inquiry because he had "insulted" Mitchel in a conference between them. But when I asked President Mitchel about it and told him that I wished to secure Professor Moore's services, but that I did not wish to take any steps toward doing so if what had been told me were true, President Mitchel said he knew nothing about any insult; and he approved Professor Moore's appointment without qualification.

Further, whether the committee intended to slight us by writing to my associates about their reports instead of to me is immaterial. What I objected to was the attempt of the committee—and that through outside and irresponsible agencies—to edit or revise the report which my associates and I are submitting, as the following quotation from my letter to President Mitchel, dated August 25, 1912, will show:

I note that you say the committee did not intend "to slight" me by writing directly to my associates about their reports. My chief objection to the course you pursued is that it is an attempted editorial revision of the report which as specialist in charge I am making to your committee. Naturally, I object to any editorial revision of the report except my own, including such co-operation of my associates as I need. My revision does not, of course, exclude from consideration such comments of yours as seem to me important.

Very truly yours,

PAUL H. HANUS.

HARVARD UNIVERSITY
CAMBRIDGE, MASS.
November 1, 1912

The Bureau of Municipal Research was interested enough to publish and circulate a folder giving a history of the report, including the following statements:

Early in July the summary of the report was submitted.

July 26, chairman of the school inquiry committee, John Purroy Mitchel, to learn "how exhaustive the investigation was" and "to understand its scope," asked Mr. Moore 18 questions.

July 28, Mr. Moore asked "to have his full report read . . . ." before discussing these 18 questions.

August 19, 223 questions were sent to Mr. Moore in a letter which closed, "For the purposes of the committee and the city, your report is wholly valueless as it now lies. It will not be published unless the additional information requested by the committee is furnished, and that promptly."

September 3, Mr. Moore wrote from London that the questions were "irrelevant, immaterial, and intended to confuse the issue. . . . ."

October 23, three members of the school inquiry committee wrote to Professor Hanus *inter alia*, "This committee, not the specialists who were employed as its investigators, is responsible to the people of this city for the results of the inquiry, and this committee is not to be expected to accept and make itself responsible for any report, the writer of which withholds from the committee the essential facts on which his conclusions are based and the sources from which these facts were drawn."

October 31, report was made by the school inquiry committee to the full Board of Estimate and Apportionment, explaining that the Moore report was rejected and would not be printed because it lacked supporting facts. "It should be clearly understood that at no time did the committee request any one of the specialists to change any conclusion or recommendation contained in his report. Facts, where lacking, were requested."

The folder then prints the following offer:

For the committee's report address John Purroy Mitchel, chairman, committee on school inquiry, 51 Chambers St. We shall be glad to circulate questions, suggestions, and criticisms from school men and editors bearing upon the general questions of public policy involved in rejecting and refusing to print reports whether by experts or non-experts which do not contain the facts upon which allegations, charges, and recommendations are based.

BUREAU OF MUNICIPAL RESEARCH
261 Broadway, New York

The Public Education Association of the city of New York in its *Bulletin* of November 27 discusses the matter as follows:

We have no brief for Professor Moore or for his report; doubtless two views of it may be entertained, and doubtless also these views will differ according to one's study and experience with the problem of city school administration.

Some presumption should be accorded to the soundness of method and accuracy of result of Professor Moore's work, at least to the extent of giving it a dispassionate consideration. What treatment of this kind it may have received during the period in which it was under discussion between the committee or any agency the committee may have seen fit to employ and Professor Hanus and Professor Moore we cannot completely say, but it is our opinion that an approach to Professor Moore, based on the 223 questions which were addressed to him in one communication, was not calculated to achieve a constructive result. From the point of view of the educational expert these questions were not intended to elicit "facts," but were in the nature of hostile cross-examination, badgering in tone, and sometimes offensive in their implications.

The public cares nothing for the right or wrong on the personal side of the controversy over the Moore report, and that is now regrettable history. But it does very much care for an authoritative appraisal of a school system by the persons who, gathered from the most important educational centers of the country, have been a full twelvemonth minutely scrutinizing the system, and it does not wish to see the results of that scrutiny wasted by conflicts between individuals or official bodies.

We believe the public properly takes the view—as Dr. Hanus and his associates most certainly do—that the Hanus report is to be taken as a unit, and attains its full value only when regarded in that way; that the rejection of any part of it dismembers it, throws the remaining parts out of proportion, and leaves an important field of inquiry untouched. This view is reasonable in itself, but it may be noticed that this sort of inquiry (though never so extensive) has been conducted before, notably in the school systems of England, and that Sir Michael Sadler's reports upon his investigations are in the nature of essays, illuminating technical and abstruse facts to the interested lay public and reaching to the fundamental philosophy of city school systems.

It is to be noted further that Sadler's reports—favorable or unfavorable—were printed by the various municipalities in full as Sadler wrote them.

The last chapter of the matter is as follows: Professor Goodenow of Columbia University and Dr. Fredric C. Howe have been employed to fill out the section of the report for which Professor Moore was originally brought in.

Only one impression can come to the impartial observer. The committee of the Board of Estimate has done its work badly. The committee probably was unfit from the first to deal with the large enterprise which it took up. Prejudice and mismanagement have interfered with the execution of a plan worthy of better control. The inquiry suffers because it was not allowed to follow scientific, objective lines. The demand for inquiries of this type is sure to be heard more and more frequently in the future. New York has shown how such an inquiry ought not to be motived and controlled. It is to be hoped that some large and influential educational system will get itself examined in a wise and sane way so that the country may see how the work can be done.

C. H. J.

AN EXPERIMENT IN COLLEGE ORGANIZATION

A plan for a new type of college education in the last two years has been worked out by a committee at Columbia University. This plan is described in the report of Dean Keppel. The organizers of this plan do not aim to provide for specialization during these last two years, but are

attempting to bring it about that students shall continue their general education. This general education, furthermore, cannot be secured, it is assumed, under the present arrangement. There must be a new group of courses and there must be an entirely different type of organization of the students' time, from that which is common in the present college course. The following statement of the general plan is given:

Students who are ready to enter the Junior class of Columbia College may elect what has been tentatively christened "The Conference Program." Two years of residence will be necessary for a degree, there being no provision for advanced standing. The course of study is to be arranged, not on departmental lines, but the aim will be to represent among the teachers the principal divisions of knowledge. A certain number of professors have already offered to conduct, in addition to their present programs, one three-hour course continuing through two years. None of these courses is to be elementary, the student being expected to familiarize himself by private study with the elementary parts of the subject not already covered by his previous collegiate work. The student is not to be graded. He may freely enter all courses, and must notify the registrar as to the courses which he plans to offer, with the approval of the instructor, for the degree. Each student is to appear at least twice a year before a conference of all of the instructors of students in the group, and to present, by means of an essay or otherwise, evidence of the progress of his studies.

The sort of program which is here outlined suggests a discussion which has frequently been held in American faculties of the advisability of conducting in American colleges a course somewhat similar to the course which is known in English universities as the "pass course." The "honor" student in an English university is a student who is specializing in a single department or in a limited group of closely related departments. The "pass" student, on the other hand, is supposed to be in pursuit of a general education. He is not subjected to the same rigorous discipline as his fellow-student who is seeking honors. In the Columbia plan, apparently, we have something related to the "pass" plan. There are undoubtedly many students who feel that they would profit by taking a more generalized course. The conflict between the interests of these students and the students who wish to enter one of the professions as soon as possible has long been a notable feature of our American college education.

Again, there is no necessary connection between a general education and the new mode of examining the student and caring for his required attendance on classes and courses. Yet there is a clear justification for the effort to make the student his own guide in the organization of his

curriculum. The experience of Harvard would seem to be a warning against the assumption that even mature college students can be freed from the requirements of regular class attendance. The new Columbia plan will therefore be of double interest to observers because it is an experiment in college administration as well as in subject-matter of instruction.

The development of a plan of this type indicates very strikingly how dissatisfied both college students and college faculties are with some of the features of American college organization. The contrast between mature and immature students ought to be more fully recognized. The problem of specialization has certainly not been solved. In short, experiments in college education are recognized as necessary and desirable.

HIGH-SCHOOL EXTENSION COURSES

The *Los Angeles Tribune* of November 14 prints the following news item:

Literature classes will open at the Los Angeles High School Sunday, November 17, at 3:00 o'clock, as the result of action by the Board of Education, granting permission for the opening of the school on Sunday. For the first time in the history of the city schools, classes will be held on Sunday. The innovation was brought about by the energy of the members of the high-school Social Center Society and the members of the Sunrise Club, an association of young men.

The course of lectures has been arranged for the literature work, and high-school teachers have volunteered their services for the work. C. C. Kelso, director of the social center work, announced the course yesterday.

Sunday, November 17, at 3 P.M.—"The Influence of Music," by Miss M. Dietrichson, professor of music.

November 24, at 3 P.M.—"Longfellow," by I. D. Perry, teacher at the Los Angeles High School.

December 1, at 3 P.M.—"Emerson," Miss Jeanette Pierce, teacher at the Los Angeles High School.

December 8, at 3 P.M.—"Bernard Shaw," by Miss Nina Updyke, teacher at the Los Angeles High School.

BOOK REVIEWS

Short Stories for Oral French. By ANNA W. BALLARD. New York: Scribner, 1912. Pp. xv+126.

This book is one of a series of French and German books which Scribner's Sons are publishing with the apparent intent of diffusing, if not exactly introducing, the "reform method" in American schools. As far as is needful for the use of the book itself, Miss Ballard explains the principles on which the method is based in her preface, and in the explicit directions given to teachers. Anyone desiring further information on the method will find it in a concise form in the *Report of the Committee of Twelve of the Modern Language Association*, D. C. Heath & Co., 1911.

Miss Ballard's book will undoubtedly fulfil its promise of providing adequate material for teachers who wish to give the method a trial. The stories appear well chosen, they have already stood the crucial test of classroom use, and are of sufficient interest and variety. Each story is followed by a list of questions, which the learner is expected to use in preparing the lesson for the next day. If these questions were omitted with a few of the later stories, it would be possible to assign to the class the very profitable task of formulating their own questions. The vocabulary does not translate the words into English, but defines them in French. The great difficulty of doing this with a limited vocabulary undoubtedly accounts for some rather questionable definitions. Is the pupil who fails to understand the word *animal* really helped by the definition, "être organisé et *doué* de mouvement," or does "qui est sur son *séant*" really enlighten him on the meaning of the word *assis?* The presentation of the French verb, the only grammatical topic treated, might call for some discussion, but only one remark seems imperative. Statements like "En français il y a trois conjugaisons," everywhere regrettable, become doubly so in a book of this nature. The learner is entitled to the truth in the study of language as in any other study, and should be taught nothing that must be unlearned later. Why not say at least "trois conjugaisons régulières"?

The very commendable purpose of the book greatly overshadows in interest the merit of the book itself, since the reform method is almost new to this country, and its successful introduction would most assuredly mean a step in advance on the road of educational progress. But just here, perhaps, a word of caution may be in order. Not until experiments in progressive education are attended with the scientific thoroughness and preparation that attend, e.g., the experiments in progressive agriculture, will they give lasting and conclusive results. The progressive farmer who wishes to raise a new

crop has his soil scientifically tested, and informs himself carefully with regard to the climatic conditions and the mode of culture under which the crop has been successfully raised, and regulates his own mode of culture accordingly. The reform method, so successfully used in German (and some other European) schools, presupposes for this success conditions that do not generally obtain in American schools, some, indeed, that are actually "antagonistic" to the usual methods employed there. Only one point, which is, however, vital, can be touched upon here.

According to Miss Ballard's directions the teacher will have to devote three recitation periods to each story, without taking into account the frequent reviews that are advocated. In the first period the story is told to, and read by, the class; in the second it is recited in French; in the third it is written in French. Done thoroughly and conscientiously this work will take up nearly the whole of the three recitation periods. On the contrary, after the story has been told and read in class, the average "diligent" pupil should not need more than half an hour to prepare the oral recitation for the next day, and barely half that time to prepare the written work for the third day. With some attention paid to verbs and other grammatical points, the possible profitable preparation would scarcely exceed one and a half hours for the three recitations, and would average considerably less for the "above the average" pupil. The average amount of preparation profitably devoted to each recitation period would not exceed half an hour, except for deficient pupils, and this would be just the amount of outside preparation expected in the German school-system. The American school-system, on the contrary, presupposes, for each forty or forty-five minute recitation of a college-preparatory unit, one hour and a quarter or one hour and a half outside preparation, nor can the required amount of reading (from 100–175 pages the first year) be "covered" unless the whole of this time is completely and profitably utilized. In other words, in German schools "the burden of learning" is laid principally on the classroom work, done under the direction of the teacher; in American schools it is laid principally on the preparation period, in the teacher's absence, and this period, in theory at least, is almost double the classroom period. It is noteworthy that the Committee of Twelve, in their thorough discussion of the different methods from the viewpoint of the American school, make no mention of the vital point of the time relation of classroom and preparation period, though it is a *sine qua non* factor of success (or failure) in all "imported" methods.

The German beginner who is supposed to devote not more than an hour and a half a day to the study of French is undoubtedly getting better value for the time employed than the American beginner who is supposed to devote from two hours to two hours and a quarter to the same study. But the American teacher who, without a careful analysis of the situation, attempts to introduce the German method of teaching into American conditions may be greatly disappointed, because much of the time specifically allotted to the outside preparation is voluntarily relinquished, and this loss is not always sufficiently

offset by the better method of classroom instruction. The result, then, is that the blame that should fall on the working-conditions is laid on the method itself, and ultimate progress is really rather retarded than advanced by such sporadic experiments.

Miss Ballard suggests, indeed, that the book can be used for oral work "no matter what other textbooks are appointed." This is true, and a little oral work cannot help proving beneficial with any method. But in the interest of real progress, is it at all desirable that the reform method should ever be judged in this country not on its own merits but by the incidental results obtained when it is grafted upon other methods, whose fundamental principles may actually be diametrically opposed to its own?

C. J. CIPRIANI

CHICAGO

Educational Psychology. By EDWARD L. THORNDIKE. 2d ed. New York: The Science Press, 1911.

In this second edition the material which was presented in the first edition is completely recast and somewhat enlarged. The aim is the same as in the first edition, namely, to present the results of investigations—mainly by the statistical method—of the influence of heredity and of environment upon mental traits, and of individual differences in mental traits. In the second edition the arrangement of chapters has been made more systematic and several chapters have been omitted. The character of these changes indicates that the author's conception of his task has become clearer and more unified. Besides these changes the book is rewritten throughout, and is brought down to date by the discussion of investigations which have been made since the publication of the first edition. This book stands alone in the field which it covers, and the new edition is welcome.

FRANK N. FREEMAN

UNIVERSITY OF CHICAGO

Plant Physiology, with Special Reference to Plant Production. By BENJAMIN M. DUGGAR. New York: Macmillan, 1912. Pp. xv+516. $1.60 net.

Professor Duggar has undertaken the task of presenting the essentials of plant physiology as they relate to crops. It seems strange, since plants are the essential things in agriculture, that plant physiology has been so long neglected as one of the essential phases of study. In agricultural and horticultural schools chemistry has usually been the underlying scientific subject, perhaps because it was well organized at an earlier date than was botany, and therefore its relation to plant productivity more easily shown; and possibly chemistry has maintained its position as the fundamental agricultural science because of the "inertia of momentum" that it has acquired through the fact of its past use. Professor Duggar's book organizes the

facts of plant physiology in such direct relation to plant productivity that it certainly will present a strong appeal, both to general students of botany and to those who look forward to pursuits that depend upon the use and knowledge of plants. The book is designed "to consider both the student and the general reader interested alike in the fundamental requirements of plants and in plant production." The author is obviously one of that rapidly increasing number of people who believe that science does not lose but rather gains through the increased significance that is secured by a direct relation of the science study to aspects that are worth while in our fundamental industries. This point of view makes the book a most pleasing divergence from the usual organization of botany.

Provision is made for a definite study of the structures of plants, since the function of parts cannot be determined without definite knowledge of the structures by means of which functions are performed. Therefore we find the second chapter taking up the plant cell and treating such topics as appear in other texts. "The Water Content of Plants" follows, and the succeeding chapters deal largely with plant activities, always including the amount of study of structures that is essential to an understanding of functions. The ultra-cautious physiologist may object that in connection with the in-take and out-go of water a ıd other materials from the plant too small an amount of physics and chemistry is presented, and that there is too little detail regarding important researches in the field covered. But it must be remembered that the author is presenting the significant phases of plant physiology to those who are being trained for a definite problem, a problem which has its own peculiar demands, just as has the problem of the specialist who wishes to give his life to a detailed study of the in-take and out-go of materials from the plant. For example, in a later chapter, the relatively large amount of space given to the relation of plants to destructive forms, either plants or animals, and the preventive measures necessary to obviate the decrease of productivity through parasites, is justified by the fact that this is the kind of plant physiological study that is most needed by the people for whom the author designed his book.

Throughout the book the topics are essentially those which we find in any comprehensive text on plant physiology. The very important difference between these topics here and elsewhere is that the illustrative material and the method of presentation relate directly to a specific use of the science of plant physiology.

The needs of general education demand that all our sciences shall be taught in such ways as may make their materials and methods worth while to general students. This demand has appeared in no textbook on plant physiology until the appearance of this book, and because of this the book is doubtless destined to exercise a potent influence in instruction, especially in agricultural colleges.

OTIS W. CALDWELL

UNIVERSITY OF CHICAGO

The Festival Book: May Day Past-Time and the May Pole. By JENNETTE E. LINCOLN. New York: A. S. Barnes & Co., 1912. Pp. xiii+74. $1.50.

It is to be regretted that Miss Lincoln and her publishers have selected such a misleading main title for this volume. As the subtitle shows, the work does not pretend to discuss the general subject of festivals, to deal with all the festivals of the year, or even to touch upon all the phases of the one particular festival selected for discussion. This volume is merely an extension of Miss Lincoln's former book entitled *May Pole Possibilities*, and, like that volume, is to be classed among those helpful collections of suggestions for drills and dances in the open air, which fortunately are becoming more numerous. This volume will be welcomed by many institutions which are joining in the strong movement for outdoor spring celebrations. The six chapters deal respectively with "Early May Day Customs"—a helpful though rather hodge-podge compilation from not generally accessible texts; "A Successful May Day Pageant"; "May Pole Dances with the Use of Streamers"; "May Pole Revels"; "Selected National Folk Dances Adapted for May Pole Festivals"; and "Accessories for May Day Pageantry." The musical selections given hardly justify the introductory descriptive word "inspiring." A number of the really excellent old English May Pole songs and dances might easily have been included.

P. W. DYKEMA

ETHICAL CULTURE SCHOOL
NEW YORK

The Present Teaching of Mathematics in Germany. By DAVID EUGENE SMITH, with the Co-operation of Various Graduate Students. (*Teachers College Record*, March, 1912.) New York: Columbia University, 1912. Pp. 124. $0.30.

The *Teachers College Record* is well known to the professional part of the teaching public. The particular issue in question undertakes to give a bird's-eye view of the present situation as regards the teaching of mathematics in Germany. It contains sixteen chapters, the first being an introduction entitled "German vs. American Conditions" by David Eugene Smith. The rest are synoptical presentations of reports on various phases of mathematics in secondary schools of Germany. The second chapter considers the evolution of the reform in Germany. The next seven chapters deal with the secondary schools of the most significant kingdoms of the German empire. The ninth chapter is on mathematics in German technical schools; the twelfth makes a study of commercial problems in higher schools of Germany. The thirteenth is on mathematics in the textbooks of physics; the fourteenth on governmental examinations in South German states; the fifteenth is on descriptive geometry in the *real* schools, and the sixteenth is a résumé of

conclusions drawn from the entire exhibit. The several chapters are careful condensations of much fuller reports by German scholars, containing the significant features of these reports for American teachers. To one who finds difficulty with the German language, or who lacks the patience to wade through the long and complete reports of the Germans, these synopses will be very welcome. Furthermore, reference is in every case given to the complete report, so that those who care to familiarize themselves more fully with the detail of these reports may readily do so.

This number of the *Record* will be highly appreciated by American students in mathematics. It can be clearly seen from it that the Germans are grappling with their problems with a high degree of success, that their methods and progress are far superior to ours, that many of the problems with which they are dealing are also our problems, and it may also be gathered, between the lines, that the solutions they are giving in many instances are pertinent to the problems now before us. What attitude is being taken by the leading teachers of Germany on the Klein reform movement in teaching, what significance there is to this reform, what meaning it may have for our own conditions, can be fairly well gauged from this collection of reports. The teacher who is trying to keep abreast with current mathematical movements will want to get at just such information as these reports contain. The interpretations made by the several authors cannot always be accepted in the form in which they are given; but enough of the basis for these interpretations is given to enable one to formulate his own conclusions.

The idea of a few years since, that what is being done in the culture countries of Europe on the teaching of mathematics has little or no significance for us, is now in a decadent state. The report makes it clear that very much of direct value to the mathematical teacher can be gotten by learning how the work is done in Germany, no matter if the conditions of German education do differ materially from our own. Every teacher of mathematics in the late grades or in secondary schools should have this report at his elbow.

A Beginner's Star Book. By KELVIN MCKREADY. New York: Putnam, 1912. Pp. viii+148. With many charts and illustrations. $2.50 net.

This book has been written primarily for the general student who is interested in the stars and loves the study of them, whether he is in school or out of school. There is an introduction of seven pages in which the author considers our heritage in the stars and explains the sky as it is mapped out for study purposes. Then follow chapters on objects to be seen in the stellar world, on learning to observe, on star maps for anyone, on objects to be seen in the solar system, on instruments of observation. Then come catalogues of telescopic objects for the use of students, and statistical tables, an index, and a few additional maps. The book is written in popular style and the

large page makes possible the introduction of some excellent reproductions of photographs. These photographs have been furnished by the Yerkes Observatory, Mt. Wilson Observatory, Lick Observatory, the Lowell Observatory, and others of the highest grade of excellence. The objects selected for photographic reproduction are well chosen to make the reader generally familiar with the various classes of objects within the reach of small telescopes. The text is written in simple style, though, considering the audience to which it is directed, the writer feels the style a bit dry. The explanations, however, are accurate and simple, and the book will meet a real need in those rare persons who interest themselves in the sky because of the pleasure there is in it. From p. 38 to p. 61 there are charts of different parts of the sky, showing objects for the opera glass, field glass, or small telescope, and facing these charts are given maps which enable the beginner readily to identify all the objects presented. Below the charts and key maps are excellent directions as to the objects that will be of most interest to the beginner. The chapter on the sun is of peculiar interest and value. Also the photographs of the moon and planets and the most reliable results of observation will charm the reader and make him want more of this wonderful subject. Sufficient explanation on the instruments of observation to make the amateur or older student intelligent in their use is given in chap. iv.

The writer can but commend the undertaking of the author of this book without reserve. There should be more of such books. The list of names of constellations and stars with their correct pronunciations indicated, together with important information for the observer at the close of the book, is of value also. The information contained in the lists is from the most recent observations and great effort has been made to have this information reliable. On the whole the book will do much to stimulate an interest in astronomy among those persons who do not have access to great and expensive instrumental equipment, but who can easily provide themselves with sufficient apparatus to afford perennial enjoyment in the study of the stars. The publishers certainly deserve great credit for the excellence of their work.

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BOOKS RECEIVED

EDUCATION

Arai, Tsuru. Mental Fatigue. (Teachers College Contributions to Education, No. 54.) New York: Columbia University, 1912. Pp. iii+115. $1.00.

Atkinson, E. H. de V., and Dawson, T. S. Report on the Enquiry to Bring Technical Institutions into Closer Touch and More Practical Relations with the Employers of Labor in India. Calcutta: Superintendent Government Printing, 1912. Pp. vii+100. 1s.

Brown, Samuel Windsor. The Secularization of American Education, as Shown by State Legislation, State Constitutional Provisions, and State Supreme Court Decisions. (Teachers College Contributions to Education, No. 49.) New York: Columbia University, 1912. Pp. iii+160. $1.50.

Cooper, Clayton Sedgwick. Why Go to College? New York: The Century Co., 1912. Pp. xii+212. Illustrated. $1.50.

Mead, George H., and Others. A Report on Vocational Training in Chicago and in Other Cities. Chicago: City Club, 1912. Pp. xiii+315.

Parkin, George R. The Rhodes Scholarships. Boston: Houghton Mifflin Co., 1912. Pp. x+250. With a portrait. $2.00.

United States Bureau of Education Bulletins, 1912. No. 12 (Whole Number 483). The Dutch Schools of New Netherland and Colonial New York. By William Heard Kilpatrick. Pp. 239. No. 13 (Whole Number 485). Influences Tending to Improve the Work of the Teacher of Mathematics. (International Report on the Teaching of Mathematics: The American Report, Committee No. VIII.) Pp. 47. No. 14 (Whole Number 486). Report of the American Commissioners of the International Commission on the Teaching of Mathematics. Pp. 84. No. 21 (Whole Number 493). A Comparison of Urban and Rural Common-School Statistics. By Harlan Updegraff and William R. Hood. Pp. 31. No. 22 (Whole Number 494). Public and Private High Schools. Prepared by the Statistical Division. Pp. 375. No. 23 (Whole Number 495). Special Collections in Libraries in the United States. By W. Dawson Johnston and Isadore G. Mudge. Pp. 140. No. 24 (Whole Number 496). Current Educational Topics, No. III. Pp. 25. No. 25 (Whole Number 497). List of Publications of the United States Bureau of Education Available for Free Distribution (September, 1912). Pp. 37. No. 26 (Whole Number 498). Bibliography of Child Study for the Years 1910–1911, Compiled by Clark University Library. Pp. 90. Washington: Government Printing Office, 1912.

GERMAN

Allen, Philip Schuyler. First German Composition. New York: Henry Holt & Co., 1912. Pp. xxxii+224. $0.90.

Bellows, Max. Dictionary of German and English, English and German. New York: Henry Holt & Co., 1912. Pp. 806. $1.75.

Corwin, Robert N. (Ed.). Keller's Romeo und Julia auf dem Dorfe. New York: Henry Holt & Co., 1912. Pp. xi+240. $0.35.

Fife, Robert Herndon (Ed.). Heine's Die Harzreise und Das Buch Le Grand. New York: Henry Holt & Co., 1912. Pp. xcv+310. Illustrated. $0.60.

Glascock, Clyde Chew (Ed.). Mörike's Mozart auf der Reise nach Prag und Ausgewählte Gedichte. Boston: Ginn & Co., 1912. Pp. xxvi+195. Illustrated. $0.45.

Gronow, Anna T. Jung Deutschland. Boston: Ginn & Co., 1912. Pp. xvi+264. Illustrated. $0.90.

Nollen, John Scholte (Ed.). German Poems, 1800–1850. Boston: Ginn & Co., 1912. Pp. xli+405. With a portrait. $0.80.

Pope, Paul R. Writing and Speaking German: Exercises in German Composition and Conversation. New York: Henry Holt & Co., 1912. Pp. x+280. Illustrated. $0.90.

Savory, D. L. Das erste Jahr des deutschen Unterrichts nach der direckten Methode. Oxford: University Press, 1912. Pp. 192. $0.60.

Whitney, Marian P., and Stroebe, Lilian L. Easy German Composition with an Abstract of German Grammar. New York: Henry Holt & Co., 1912. Pp. viii+180. $0.90.

Wilson, A. E. (Ed.). Wieland der Schmied (Adapted from the German Saga). Oxford: University Press, 1912. Pp. 72. $0.40.

HISTORY

Johnson, Allen. Readings in American Constitutional History, 1776–1876. Boston: Houghton Mifflin Co., 1912. Pp. xvii+584. $2.50.

Moritzen, Julius. The Peace Movement of America. New York: Putnam, 1912. Pp. xix+419. Illustrated. $3.00.

Spence, Lewis. The Civilization of Ancient Mexico. Cambridge (England): The University Press; New York: Putnam, 1912. Pp. viii+121. Illustrated. $0.40 net.

World Peace Foundation Pamphlet Series: The World Peace Foundation, Its Present Activities; The Right and Wrong of the Monroe Doctrine, by Charles F. Dole; William T. Stead and His Peace Message, by James A. MacDonald; Revised List of Arbitration Treaties, by Denys P. Myers; Neutralization, America's Opportunity, by Erving Winslow. Boston: World Peace Foundation, 1912.

SCIENCE

Bradbury, Robert H. An Inductive Chemistry. New York: D. Appleton & Co., 1912. Pp. xi+122. Illustrated.

Bradbury, Robert H. Laboratory Studies in Chemistry. New York: D. Appleton & Co., 1912. Pp. ix+129. Illustrated.

Dryer, Charles Redway. High School Geography, Physical, Economic, and Regional. New York: American Book Co., 1912. Pp. 536. Illustrated. $1.30.

Peabody, James Edward, and Hunt, Arthur Ellsworth. Elementary Biology, Animal and Human. New York: Macmillan, 1912. Pp. xv+212. Illustrated. $1.00.

Reeve, Frederick C. Physical Laboratory Guide. New York: American Book Co., 1912. Pp. x+182. Illustrated. $0.60.

Rose, Mary Swartz. A Laboratory Hand-Book for Dietetics. New York: Macmillan, 1912. Pp. ix+127. $1.10 net.

ART

Barstow, Charles L. Famous Pictures. New York: The Century Co., 1912. Pp. viii+239. Illustrated. $0.60.

Dow, Arthur Wesley. Theory and Practice of Teaching Art. (Second Edition, with Additional Text and Illustrations.) New York: Columbia University, 1912. Pp. iii+73. $1.50.

Kelley, Charles Fabens, and Mowll, William Luther. A Text-Book of Design. Boston: Houghton Mifflin Co., 1912. Pp. x+134. Illustrated. $2.00.

BOOKKEEPING AND MANUAL TRAINING

Bennett, R. J. Bookkeeping and Accounting Exercises. Part I. Pp. 96. $0.40. Part II. Pp. 112. $0.45. New York: American Book Co., 1912.

Ilgen, William L. Forge Work. (With editorial revision by Charles F. Moore.) New York: American Book Co., 1912. Pp. xii+210. Illustrated. $0.80.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS[1]

IRENE WARREN[2]
Librarian, School of Education, University of Chicago

Abbott, P. The fifth International Congress of Mathematics. School W. 14:416–19. (N. '12.)

Affleck, G. B. Bibliography of physical training and hygiene, May–August, 1912. Am. Phys. Educa. R. 17:624–36. (N. '12.)

Arnold, Frank R. Bicentenary viewpoints of Rousseau. Educa. 33:135–37. (N. '12.)

Brereton, Cloudesley. The character-forming influence of vocational education. J. of Educa. (Lond.) 44:779–80. (N. '12.)

Bronk, Isabelle. Experiences of a non-native teacher of modern languages. Educa. 33:150–58. (N. '12.)

Brown, J. C. An investigation on the value of drill work in the fundamental operations of arithmetic. J. of Educa. Psychol. 3:485–92. (N. '12.)

In the investigation reported in this paper, the pupils who had been drilled did uniformly and considerably better than the others.

Carringer, M. A. The ten year old boy and his books. Educa. 33:166–69. (N. '12.)

Charles, Fred. The second Moral Education Congress. School W. 14:419–21. (N. '12.)

Clark, Herbert F. An experiment in concentration. Psychol. Clinic 6:178–79. (N. '12.)

The effect of permission to leave school when tasks were finished upon a group of boys in a special school.

(The) Cleveland meeting of the American Association for the Advancement of Science. Science 36:707–10. (22 N. '12.)

Preliminary program, directory of meetings, etc.

[1] *Abbreviations.*—Am. Phys. Educa. R., American Physical Educational Review; Cent., Century; Child Wel. M., Child Welfare Magazine; Educa., Education; El. School T., Elementary School Teacher; English J., English Journal; J. of Educa. (Bost.), Journal of Education (Boston); J. of Educa. (Lond.), Journal of Education (London); J. of Educa. Psychol., Journal of Educational Psychology; Lit. D., Literary Digest; Man. Train. M., Manual Training Magazine; Outl., Outlook; Pop. El. M., Popular Electricity Magazine; Pop. Sci. Mo., Popular Science Monthly; Psychol. Clinic., Psychological Clinic; School R., School Review; School W., School World; Sci. Am. Sup., Scientific American Supplement; Tech. World M., Technical World Magazine.

[2] Annotations by Dr. Frank N. Freeman.

Colby, Lester B. Great new school for Texas. Tech. World M. 18:388–91. (D. '12.)

Crichton-Browne, James. Child study and school hygiene. Child (London) 3:105–16. (N. '12.)

Crossley, M. L. The function of a college education. Educa. 33:129–34. (N. '12.)

Drinker, Cecil K. Undergraduate research work in medical schools. Science 36:729–38. (29 N. '12.)

An investigation of the opportunities for undergraduate research in selected American medical schools.

Du Breuil, Alice Jouveau. Written composition in the high school. English J. 1:537–46. (N. '12.)

Dumville, Benjamin. The methods of teaching reading in the early stages. School W. 14:408–13. (N. '13.)

A comparison of the method of phonetic analysis with the "Look and Say" method to the advantage of the latter.

England's athletic schoolboy. Lit. D. 45:905. (16 N. '12.)

Foxley, Barbara. How children learn to read. School W. 14:413–16. (N. '12.)

A comparison of the phonetic and "common-sense" methods to the advantage of the latter.

Gallienne, Richard le. Children in fiction. Harper 126:73–78. (D. '12.)

Gayler, G. W. Are the elementary schools getting a square deal? Psychol. Clinic 6:174–77. (N. '12.)

A comparison of the salaries and per capita expenses in the elementary and high school.

Hall, John W. Plans for grade lessons in geography. El. School T. 13:171–79. (D. '12).

Hays, Willet M. A national university. Science 36:723–29. (29 N. '12.)

A criticism of certain features of the scheme presented by Presidents Van Hise and James, together with certain positive suggestions.

Hein, Leon F. A. The cost of materials for manual training in the elementary grades. Man. Train. M. 14:129–37. (D. '12.)

Hill, David Spence. The need of practical co-operation of educational and of medical departments in modern universities. Science 36:647–59. (15 N. '12.)

Howe, Charles B. The future of the manual training high school in vocational education. Man. Train. M. 14:105–14. (D. '12.)

(An) industrial university. Pop. El. M. 5:859–60. (D. '12.)

Johnson, Alvin S. The child and social reform. Dial 53:380–83. (16 N. '12.)

King, Irving, and Johnson, Harry. The writing abilities of the elementary and grammar school pupils of a city school system measured by the Ayres scale. J. of Educa. Psychol. 3:514–20. (N. '12.)

The results of the application of the Ayres test to the eight grades and a table showing the variability among eight judges.

Kirkpatrick, E. A. Financial training of children. Child Wel. M. 7:73–78. (N. '12.)

Koeppel, George. Observations concerning the organization of schools and certain phases of educational work in Germany. El. School T. 13:189–97. (D. '12.)

Leslie, R. Murray. Child welfare and industrial insurance. Child (London) 3:117–24. (N. '12.)

McCracken, Elizabeth. Children in bookland. Outl. 102:686–92. (23 N. '12.)

MacDougall, Robert. The child's speech. II. J. of Educa. Psychol. 3:507–13. (N. '12.)

The influence of the mother's speech as a model for the child.

Moorhead. F. G. College f r egg buyers. Tech. World M. 18:396–98. (D. '12.)

Noyes, Ernest C. Progress in standardizing the measurement of composition. English J. 1:532–36. (N. '12.)

A popular description of the Thorndike-Hillegas method, with approval.

O'Leary, Raphael D. Pity the poor teacher. English J. 1:552–56. (N. '12.)

Paul, Harry G. The teaching of lyric poetry. II. English J. 1:521–31. (N. '12.)

Porter, Elizabeth Crane. A pageant of progress. Outl. 102:653–59. (23 N. '12.)

Prince, John T. Moral training in public schools. Educa. 33:138–43. (N. '12.)

Raycroft, J. E. The athletic research society. Am. Phys. Educa. R. 17:585–98. (N. '12.)

Rickert, Edith. Exclusiveness among college women. Cent. 85:227–35. (D. '12.)

Riis, Jacob A. The New York newsboy. Cent. 85:247–55. (D. '12.)

Robinson, Edward Van Dyke. The reorganization of the grades and the high school. School R. 20:665–88. (D. '12.)

Rogers, A. K. The function of the American college. Pop. Sci. Mo. 81:574–81. (D. '12.)

Ryle, E. A three years' Latin course. School W. 14:401–4. (N. '12.)

Sargent, D. A. Defects in the school curriculum in physical training as shown by the disabilities of college students. Am. Phys. Educa. R. 17:602–7. (N. '12.)

Schools for tractioneers. Sci. Am. Sup. 74:348. (30 N. '12.)

Schurman, J. G. Faculty participation in university government. Science 36:703–7. (22 N. '12.)

A formal proposal to extend to professors representation upon the governing bodies of the university.

Scott, J. F. Apprenticeship under the English gild system. El. School T. 13:180–87. (D. '12.)

Scovel, Mary C. The theater: a second grade problem. Man. Train. M. 14:115–28. (D. '12.)

Sisson, Edward O. College students' comments on their own high-school training. School R. 20:649–64. (D. '12.)

Smith, F. The psychology of adult reading. School W. 14:404–8. (N. '12.)

A brief account of the results of the experiments on reading—no new material.

Smith, Harlan I. The educational work of a great museum. Science 36: 659–64. (15 N. '12.)

A description of the ways in which a museum may extend the scope of its influences.

Smith, Simeon Conant. Poetic triteness. English J. 1:547–51. (N. '12.)

Snow, Mary S. Essentials in education. J. of Educa. (Bost.) 76:507–8. (14 N. '12.)

Squire, Carrie Ransom. Graded mental tests. III. J. of Educa. Psychol. 3:493–506. (N. '12.)

A continuation of the report on graded tests to include the higher mental processes. Also a classification of abilities in all the tests according to age.

Stowe, Lyman Beecher. Training city boys for country life. Outl. 102: 537–41. (9 N. '12.)

Stowe, Lyman Beecher. Training city boys for country life. II. Outl. 102:584–91. (16 N. '12.)

Thorn-Wright, Doris. Oral reading in its relation to the study of literature. English J. 1:557–61. (N. '12.)

Utsurikawa, Nenozo. The status of Japanese students in America: past and present. Educa. 33:144–49. (N. '12.)

Wallin, J. E. Aspects of infant and child orthogenesis. Psychol. Clinic 6:153–73. (N. '12.)

A critical consideration of the methods of eugenics and of euthenics in promoting the mental and physical welfare of the child.

Wild, Laura H. Training for social efficiency—the relation of art, industry and education. Educa. 33:159–65. (N. '12.)

Woodrow Wilson at college. Lit. D. 45:970–72. (23 N. '12.)